This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

+ *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.

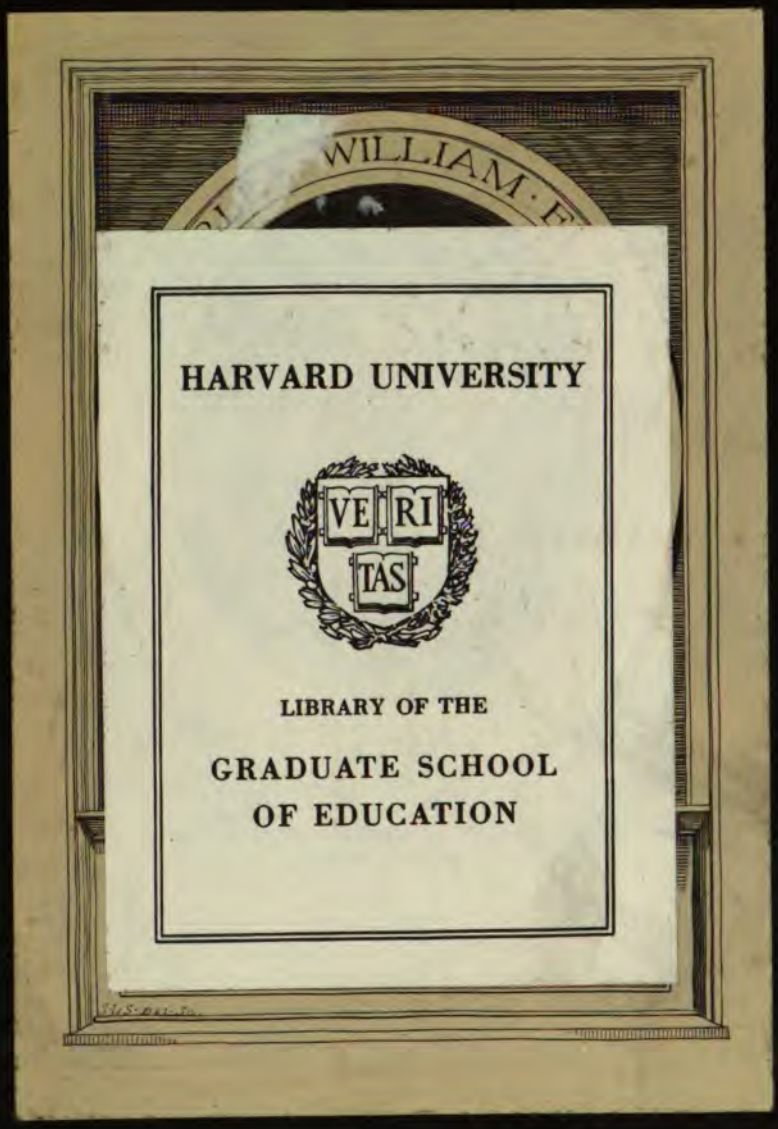
+ *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.

+ *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.

+ *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at `http://books.google.com/`


WILLIAM
HARVARD UNIVERSITY
VE RI
TAS
LIBRARY OF THE
GRADUATE SCHOOL
OF EDUCATION

46

BEMROSE & SONS PHOTO-TINT. LONDON & DERBY.

CASTLE HOWELL SCHOOL, LANCASTER.

THE

Castle Howell School Record,

COMPRISING

A LIST OF PUPILS FROM THE BEGINNING, PAPERS ON THE ORIGIN, NAME, AND CHANGES,

BY PRINCIPALS,

AND

MISCELLANEOUS ARTICLES

CONTRIBUTED

BY OLD BOYS.

LANCASTER.
PRINTED FOR THE SUBSCRIBERS BY R. & G. BRASH, CHEAPSIDE.
1888.

LF795
.L45D3

HARVARD UNIVERSITY
GRADUATE SCHOOL OF EDUCATION
MONROE C. GUTMAN LIBRARY

APR 7 1930

CONTENTS.

PAGE

PREFACE ... ... ix.

REGISTER OF PUPILS—

A.—Under W. H. HERFORD ... ... xvii.

B. „ D. DAVIS ... ... xix.

CONTRIBUTIONS BY PRINCIPALS.

1. THE ORIGIN OF THE SCHOOL, by W. H. HERFORD, B.A. ... ... xxvii.

2. THE ORIGIN OF THE NAME, by D. DAVIS, B.A. ... ... xxxi.

3. SOME CHANGES IN THE SCHOOL SINCE 1862, by RUDOLF DAVIS, B.A. ... xlv.

CONTRIBUTIONS BY PUPILS.

1. THE DEPRESSION OF TRADE, by ARTHUR HOLLAND 54

2. NOTES ON THE PHYSICAL GEOGRAPHY, FLORA, FAUNA, &c., OF NORTHERN FORMOSA, WITH COMPARISONS BETWEEN THAT DISTRICT AND HAINAN AND OTHER PARTS OF CHINA. BY WILLIAM HANCOCK, F.L.S., F.R.G.S., Chinese Imperial Customs Service 146

3. Duke Street, Little Britain. By Norman Moore, M.D. (Cantab.), Fellow of the Royal College of Physicians, Warden of the College of St. Bartholomew's; Assistant Physician and Lecturer on Pathological Anatomy to St. Bartholomew's Hospital ... 9

4. A Reply to Dr. Warton's "Triumph of Isis." By Norman Moore, M D., of St. Catharine's College, Cambridge, &c., &c. 17

5. How Winchester Cathedral Illustrates the Story of Religion in England. By Henry Shaen Solly, M.A. 27

6. The Escalade. By Walter Greg 62

7. An Hour in the Thorvaldsen Museum. By C. H. Herford, M.A., of Trinity College, Cambridge; late Berkeley Fellow of the Owens College, Manchester; Professor of English Language and Literature in the University College of Wales 1

8. The Lakes. By Valentine D. Davis, B.A. 252

9. Railway Signalling. By W. Bayley Marshall, M. Inst. C.E., M. Inst. M.E., F.R.S.S. 19

10. Missing Links. By A. Milnes Marshall, M.A., M.D., D. Sc., F.R.S.; Beyer Professor of Zoology in Owens College; late Fellow of St. John's College, Cambridge 85

11. Reminiscences of my Boyhood. By Herbert New, Junr. 68

12. A South American City. By Arthur New 115

13. Historical Charts, &c., of the United States of America. By Edgar Worthington, B. Sc., Assoc. O.C.; Assoc. M.I.C.E. ... 36

14. The Royal Albert Asylum and its Work. By Henry R. Hutton, M.A., M.B., Cantab 241

15. Lancaster Castle. By H A. Paley, A.R.I.B.A. 205

16. Undergraduate Life at Oxford. By William Llewelyn Herford, of Keble College 106

17. The Cathedral Churches of England. By T. Locke Worthington, A.R.I.B.A. 41

18. Human Nature. A Cartoon by Oliver Herford 128

19. The Charity Organisation Society. By A. H. Paterson 48

20. A Drive through Bulgaria. By Percy Scott Worthington, B.A., Oxon. 221

21. "Under the Southern Cross." By C. M. Wellbeloved ("Wellbye") 129

22. The Genesis of Design. By Herbert W. Wills, A.R.I.B.A. ... 76

23. Sketches of the Falkland Islands. By U. Vernon Herford ... 134

24. The Washingtons and their Connection with Warton. By Henry Whitman 192

ILLUSTRATIONS.

CASTLE HOWELL SCHOOL, LANCASTER ... ... FRONTISPIECE

PAGE

CASTLE HOWELL, CARDIGANSHIRE ... ... xxxix.

CASTLE HOWELL SCHOOL—THE GARDEN ... ... xliv.

„ „ „ THE PLAYGROUND ... ... lvii.

DIAGRAMS ILLUSTRATIVE OF 'RAILWAY SIGNALLING' 26

HISTORICAL CHART OF THE U. S. OF AMERICA 40

NORMAN CAPITAL; WOOLTON, GLOUCESTERSHIRE.—EARLY ENGLISH CAPITAL; TOMB, YORK MINSTER.—DECORATIVE CAPITAL; ALTAR SCREEN, BEVERLEY: HASLINGFIELD CHURCH, CAMBRIDGESHIRE 44

GROUND PLAN OF BERKELEY CASTLE.—GROUND PLAN OF A MODERN RIVERSIDE HOUSE 80

HUMAN NATURE, A CARTOON (WITHOUT TEXT) 128

MAP OF NORTH FORMOSA... 188

PEDIGREE OF THE WASHINGTON FAMILY 193

THE 'ARMS OF WASHINGTON' ON WARTON CHURCH.—THE WASHINGTON HOUSE, WARTON 201

LANCASTER CASTLE GATEWAY 205

PLAN OF LANCASTER CASTLE PRIOR TO 1778 215

VIEWS OF LANCASTER CASTLE, 1778.—NORTH TURRET, OLD CHIMNEY, STEPS LEADING TO EAST TURRET, GATEWAY TOWER.—ROMAN ALTAR FOUND DURING ALTERATIONS IN 1795.—SHIELDS ON GATEWAY TOWER, ROYAL ARMS, 1405–1603, PRINCE OF WALES' ARMS, HEN. V.—ROSE OF LANCASTER.—ARMS OF JOHN OF GAUNT AS DUKE OF LANCASTER; AS KING OF CASTILE AND LEON... 220

THE ROYAL ALBERT ASYLUM, LANCASTER 241

PREFACE,

REGISTER OF PUPILS,

AND

CONTRIBUTIONS BY PRINCIPALS.

PREFACE.

Here is our volume at last—not indeed as complete in its representation of every school generation as we had hoped, but sufficiently to link the earlier and the later, even the latest, in common fellowship.

Its origin and history will be best recorded by the collocation of the three circular communications sent to all old Lancaster boys whose addresses were ascertained. The list of articles announced in the first letter as conditionally promised, is omitted, unfavourable conditions having in some cases prevailed over good intentions. "Graphic Methods" find themselves well exemplified by the Chart of the United States. Literary engagements previously entered into, the inexorable claims of practical life, and other causes explain the absence of some hoped for contributions by those who had both the power and the wish further to enrich the table of contents.

The various, for the most part negative, responses to the suggestions of additional details for the "Record" communicated in the second letter, left me no alternative but to give simply the names and dates of all old Pupils without any addition. The Portrait scheme, also there broached, was so little favoured that it was impossible to carry it out. No materials for an index have been provided, and I regret the impossibility of finding time to prepare one unassisted.

To our subscribers it is needless to say that this volume is not published. To others who may have access to its pages it may be well to note that some of the papers have been written with the unrestrained freedom natural to those who feel that they belong to one household (albeit the number of its successive inmates runs into three figures), and write as Old Boys to Old Boys.

As the delay in the appearance of our volume would have been indefinitely protracted had we waited till all the materials were

collected for chronological arrangement, they have for the most part been printed without any attempt at such order which, however, is followed in the Table of Contents, No. 1 being the paper of the earliest pupil who has contributed, and No. 24 being the holiday work of a present pupil.

As soon as practicable after the volume is in the hands of the subscribers, the "Chart of the United States" will be published by the Messrs. Heywood, Manchester and London; and "Warton and its connection with the Washingtons," by Messrs. Damrell and Upham, 383, Washington Street, Boston.

Should there be any balance after all expenses have been paid, it will still remain a separate deposit with the Lancaster Banking Company to be expended in any way which may suggest itself to the subscribers as likely to promote the objects with which the undertaking was entered on, viz., the revival of common school memories and the strengthening the ties which unite the present and the past.

The work is accomplished, if but imperfectly; and, while regretting that more have not joined in the promotion of it, I would conclude with a word of hearty thanks to those who, at no little sacrifice of time and trouble, have joined me in what has been truly a labour of love.

D.D.

Lancaster, 18th October, 1888.

I. PRINTED CIRCULAR LETTER.

CASTLE HOWELL SCHOOL,
LANCASTER, JUNE, 1887.

DEAR "OLD BOY,"

The pleasant sight of a prize essay on Manchester Cathedral by one old pupil, and the remembrance of the many distinctions gained by others, first suggested the thought of celebrating the completion of the 25th year of our sole charge of the School at the close of last year, by the production of a Volume of Contributions by old Lancaster Boys.

The preparatory steps were checked. The delay has had the happy effect of extending the scheme so as to include the whole period of the School's life from its commencement by my friend and brother, Mr. W. H. Herford, B.A.

Mr. Herford cordially co-operates with me in carrying it out, and authorises me in his name to address this Circular to his Old Boys, as well as mine, as having a like interest in the production of such a Memorial Volume.

Our proposal, then, is to bring together in a Volume a Record of our School from its beginning, and papers contributed by representatives of each succession of pupils to the close of 1886.

The realisation of the idea must be dependent on the response to this note. We could wish, indeed, that it had been in our power to gather in the hoped for harvest of contributions, and present a copy to each of our Old Boys; but that cannot be. We can only hope to carry out the scheme if it is generally accepted by them, and if they are ready to share in its cost. If all join, it is calculated that five shillings will be enough to pay for simply printed copies. But the interest and value of some contributions will be greatly increased by the addition of illustrations, which to a moderate extent might be secured by a subscription of ten shillings.

It would doubtless gratify many old Tutors who have shared with us the work of the School, to receive a copy of the projected Volume. Whether that pleasure can be given must depend on the response we receive.

We hope there are enough Lancaster memories, *quæ meminisse juvabit*, to secure your co-operation.

Bis dat qui cito dat.

We shall be obliged to you to send for the "Record" all additions to your name, as degrees and academical and other distinctions, and the names of schools previously and subsequently attended.

Sincerely yours,

D. DAVIS.

II. LITHOGRAPHED CIRCULAR LETTER.

CASTLE HOWELL SCHOOL,
LANCASTER, 15TH DEC., 1887.

DEAR SIR,

In our circular letter to old pupils proposing the embodiment in a Volume of a Record of our School and contributions by themselves, I gave the alternative of an edition at 5/- if all joined, and another at 10/- with some illustrations. As not more than five subscribers have preferred the cheaper form, it will be only possible to bring out the edition at 10/-.

To a considerable extent the suggestion has been cordially welcomed, and I have received, both from Mr. Herford's pupils and my own, very gratifying letters and contributions which ensure success. Several, indeed, accompanied their assurances of co-operation with enclosures of Cheques and Postal Orders, which were at once paid in to a separate account with the Lancaster Banking Company, devoted exclusively to the cost of the undertaking. While on the subject of finance I may say that I propose to give a

complete List of Subscriptions and a Balance Sheet including details of expenditure, when the work is finished.

Progress has been delayed by want of information for the "Record," for which only a comparatively small number of contributions has been sent. My intention in the words "*We shall be obliged to you to send for the Record all additions to your name, as degrees and academical and the distinctions, and the names of Schools previously and subsequently attended,*" was to ask for a chronological account of school and university examinations passed, with prizes and honours gained, the names of other schools attended being required that we may not seem to take to ourselves credit due, more or less, to others. The delay of this information determined me not to wait for it before beginning the work; the first part of the volume will therefore be printed last, printer and lithographer having been already for some weeks engaged on the original contributions.

As just stated, the "Record" was intended to be purely academical, with the addition of such distinctions as F.R.S., J.P., and military rank. A wish has, however, been expressed by one correspondent that it should embrace also personal particulars such as present address, occupation, marriage, &c. These are particulars which, however interesting, I did not feel at liberty to ask for. I mention the wish in order to elicit opinion upon it, as I am quite ready to enlarge the scope of the "Record" if generally desired, thus linking old school-day associations with present interests. I shall be obliged to those who have already cordially responded for an opinion on this point. May I ask for a reply from all, at least to the first request? If this second application is not more successful the "Record" must be a simple list of names.

Another correspondent suggests that the most interesting illustrations would be the latest photographs of "Old Boys." Reduced carte-de-visite portraits could be given at a cost of about 4/- each for the edition. If everyone subscribed to the Volume the cost would be met; 100 additional subscriptions will be necessary to carry out the suggestion.

With this object in view will you kindly send your carte-de-visite of the usual size. If you express the wish it can be returned, but each contribution towards a permanent collection will be gratefully welcomed.

One word more to contributors. I regret very much the impossibility of answering as I could wish the many letters received, and must ask each individual correspondent to supplement my short business replies with warm expressions of grateful appreciation of the papers sent in. There is one class of papers, indeed, which I have received and read with great pleasure, but am unable to utilize—short poems, which, however excellent in themselves, would not appear to advantage when printed side by side.

The preparation of an Index will be greatly facilitated if each contributor will kindly tabulate the items furnished by his own paper.

I am anxious at once to complete the arrangement of the material, and shall be obliged to those who have not yet sent in their contributions to let me have them by the end of the year. This will make possible the delivery of the Volume in the course of the spring.

With every assurance that the time and trouble expended by so many will produce results interesting and gratifying to all.

I remain, dear sir,

Faithfully yours,

D. DAVIS.

P.S.—My address from December 23rd to January 13th will be Almswood, Evesham.

III. PRINTED POSTCARD.

CASTLE HOWELL SCHOOL RECORD,
LANCASTER, 10TH AUGUST, 1888.

DEAR SIR,

As it is impossible for me to write the requisite number of letters, I take this means of letting you know that our Volume is approaching completion, and, it is hoped, will be ready for delivery in the course of a few months.

The "Record" of old pupils will not include any particulars beyond the name and date.

The Subscription List will close with the present month.

After the 31st the amount payable will be 15/-, the nearest round average of subscriptions so far.

The work has been paid for as it has proceeded, as subscriptions received have allowed.

They may be paid in to my No. 1 account with the Lancaster Banking Company, Lancaster, if not sent direct to myself.

Yours sincerely,
DAVID DAVIS.

REGISTER OF PUPILS.

A. UNDER W. H. HERFORD.

1	Alfred William Smith	1850
2	Alfred William Peyton	,,
3	William Broadbent	,,
4	John Jackson Burbery	,,
5	Francis Darbishire	,,
6	Henry Russell Worthington ...	,,
7	Hugo Worthington	,,
8	Frank Peyton	1851
9	Robert Peyton	,,
10	George Burbery	,,
11	Charles James Worthington	,,
12	George Patrickson	,,
13	Walter Heald	,,
14	J. Lawson Whalley	,,
15	John Murray Kennedy	,,
16	Howard S. Smith	1852
17	George Allen	1853
18	Ernest Heald	,,
19	Edward Seymour Stone	,,
20	William Channing Osler	,,
21	Fred. Alex. Leisler	1854
22	Arthur Holland	,,
23	William Gaskell Holland	,,
24	Russell Swanwick	,,
25	Morville Barmby	,,
26	Louis Greg	1855
27	Harold Marsland	,,
28	Octavius Stone	,,

29	S. Herbert Greg	1855
30	Aymer Lamport	,,
31	Joseph Priestley Smith	,,
32	William S. Allen	,,
33	F. Harold Boult	1856
34	Edward Alfred Jee	,,
35	William Peyton Burbery	,,
36	Wilfrid Ainger	,,
37	Herbert Harvey	,,
38	William Haslam	,,
39	Daniel Grant Grundy	,,
40	William Hancock	,,
41	Philip Percy New	,,
42	Norman Moore	,,
43	Henry W. Hawkes	1857
44	Michael Henry Lakin	,,
45	John Patrick	,,
46	David Simms	,,
47	Charles Harrold	,,
48	George Henry Cox	,,
49	Joseph Crook Haslam	,,
50	Joseph Stone Burbery	,,
51	Henry Shaen Solly	1858
52	Alfred Clarkson Osler	1859
53	Arthur Fenton Herford	,,
54	Walter Buckton	,,
55	Charles Wicksteed	1860
56	John Percival Haslam	,,
57	Percy Lawford	,,
58	Stephen Cliff	,,
59	John Heywood	,,
60	Edward Handfield Morton	,,
61	Henry Ewart	,,
62	Malachi Locke Blake	,,
63	Dennis Cropper	1861

64	Lindsay Cropper	1861
65	Francis H. Bishop	,,
66	William Holbrook Robson*	,,
67	Robert S. Carpenter	,,
68	Sidney Aspland	,,
69	Walter Greg	,,
70	William Barton Worthington	,,

B. UNDER D. DAVIS.

1	John Ernest Herford	1862
2	Henry Shaen Solly	,,
3	Edward Handfield Morton	,,
4	William Holbrook Robson*	,,
5	Percy Lawford	,,

* WILLIAM HOLBROOK ROBSON, born at Warrington, Sept. 7th, 1849. His education was carried on

Firstly with a home governess.

Secondly at the Newton St. Schools, Warrington.

Thirdly at the Rev. W. H. Herford's, Lancaster, and during this period he passed the Oxford Local Examination held in Manchester as a Junior Candidate in 1862.

Fourthly as a pupil of the London University College School in 1863.

He matriculated at London University College in June, 1866, and as first in the Honour division won the Matriculation Exhibition of £30 a year, for two years; and also the Andrews' Exhibition of £40 a year. In the first session of his Collegiate life, 1866—1867, he won the Second Honors' Certificate, and the Second Prize of the Junior Class of Mathematical Physics; also the Second Certificate and the Second Prize of the Lower Senior Class of Mathematics, and as "the greatest proficient in Mathematics, pure and applied, of Students of one year's standing," the Andrews' prize of £25. He won also the 5th Certificate in the Honors' division of the Senior Class of English. At a subsequent examination in 1867, he won the prize instituted by the Jews to commemorate the removal of their political disabilities, for "breadth of scholarship." He did not complete his second session and died, after an illness extending over a year, Sept. 4th, 1868.

6	Arthur George Lawford	1862
7	Francis Howard Bishop	,,
8	Charles Wicksteed	,,
9	Walter Buckton	,,
10	Stephen Cliff	,,
11	Charles Harold Herford	,,
12	Robert S. Carpenter	,,
13	Sydney Aspland	,,
14	Walter Greg	,,
15	Rudolf Parisius New Davis	,,
16	Valentine David Davis	,,
17	William Barton Worthington	,,
18	William Henry Murland	,,
19	Wymond Frederick Broughton ...	,,
20	Percy Simpson	,,
21	Francis Watson Osler	,,
22	William Bailey Marshall	,,
23	Charles Murland	,,
24	Arthur Stanley Darbishire	,,
25	Henry James Stansfeld	,,
26	Godfrey Darbishire	1863
27	Arthur Milnes Marshall	,,
28	Charles Howard Thomas	,,
29	Walter Weyermann	,,
30	Francis Hollins Warden	,,
31	Thomas Williams	,,
32	Herbert New	,,
33	Arthur New	,,
34	Henry Lakin Hancock	,,
35	Henry Behrens	,,
36	Edward Septimus Dowson	,,
37	Paul Jolly	1864
38	William Eller	,,
39	Matthew Henry Simpson	,,
40	James Edward Darbishire	,,

41	Horace Charles Bolingbroke	1864
42	Frederick Henry Bolingbroke... ...	,,
43	Louis Errington Bolingbroke	,,
44	John Fielden	,,
45	Thomas Fielden	,,
46	John Johnson	,,
47	Joseph Marston Warden	,,
48	Ernest Michael Bolingbroke	1865
49	Walter Ridout Wills	,,
50	Henry Cromwell Field	,,
51	Arthur Currer Briggs	,,
52	Harold Shawcross	,,
53	Alfred S. Rathbone	,,
54	Grosvenor Hollins	1866
55	Thomas Thornely	,,
56	Douglas Lawford	,,
57	James Raymond Solly	,,
58	Harold Woolley	,,
59	George Andrews	,,
60	Ralph Edgar Haslam	,,
61	Lewis Haslam	,,
62	W. W. Humphrey Hollins	,,
63	William J. J. Kirkpatrick	1867
64	William Porter	,,
65	William Humble Johnson	,,
66	Edgar Worthington	,,
67	Theodore Martin	,,
68	Roland New	,,
69	Geoffrey New	,,
70	William Wharton Ogden	1868
71	Edgar Storey	,,
72	Arthur Thomas Wills	,,
73	Harold Sherren Storey	,,
74	John Hancock	,,
75	Thomas Henry Jevons	,,

76	Henry Richmond Hutton	... ...	1868
77	Richard Holt Hutton	... ...	„
78	Henry Anderson Paley	... ...	1869
79	Lewis Hartley White	... ...	„
80	William Edward Akroyd	... ...	„
81	Richard Ashworth ...	... ...	„
82	Wilfrid Jevons ...	... ...	„
83	Philip Henry Maxsted	... ...	1870
84	George Booth Tate...	... ...	„
85	Walter Martineau ...	... ...	„
86	Arthur Henry Worthington...	...	„
87	Thomas David Kirkpatrick ...	...	„
88	Frank Maxwell Dobson	... ...	„
89	Alfred Maximilian Cornely ...	...	1871
90	Harry Nevison Hammond	... ...	„
91	Edward Burbery Martin	... ...	„
92	William Llewelyn Herford	... ...	„
93	Frederick William Monks	... ...	„
94	Robert Dempster ...	... ...	„
95	John Edward Ogden	... ...	„
96	Charles Percy White	... ...	„
97	Arnold Edward Neate	... ...	„
98	Frederick William Salter	... ...	„
99	James Williamson Wearing ...	...	„
100	George Hamilton Fletcher	... ...	1872
101	John Arthur Pownall	... ...	„
102	Thomas Locke Worthington...	...	„
103	John Brooke Herford	... ...	„
104	Walter Barnes Dendy	... ...	„
105	Edward Evershed Dendy	... ...	„
106	Joseph Henry Grundy	... ...	„
107	David Laseron ...	... ...	„
108	Harry Leigh Brace...	... ...	„
109	Gerald O'Dwyer Briggs	... ...	1873
110	Gilbert Henry Briggs	... ...	„

111	Frederick Lindsay O'Dwyer	1873
112	William Hamelyn Curtis	,,
113	George Dalby	,,
114	Arthur Dalby	,,
115	A. E. Gladstone	1874
116	Oliver Brooke Herford	,,
117	Oliver Huxham New	,,
118	Roland Jevons	,,
119	Francis Jevons	,,
120	William Thomas Holland	,,
121	Arthur Henry Paterson	1875
122	George Trevor Huxham	,,
123	Henry Broome	,,
124	Frank Lewis Ogden	,,
125	Milnes Loy Morton	,,
126	Charles Gibson	,,
127	George Herbert Reid	,,
128	Thomas Makin Draper	,,
129	John Percy Kearne	,,
130	Arthur Froane	,,
131	Philip Francis Morton	,,
132	William Jevons	,,
133	Percy Scott Worthington	,,
134	Ernest Edward Briggs	1876
135	John Alfred Jones	,,
136	Arthur Charles Kent	,,
137	Philip Henry Holland	,,
138	Albert Ashton	,,
139	Charles Montgomery Wellbeloved ...	,,
140	Bryan Edward Johnson	,,
141	Henry Christopher Lamport	,,
142	Edward Gaskell Lamport	,,
143	William Brooke Smith	,,
144	Joseph Wood Wells	1877
145	Austin Guy Wrigley	,,

146	Herbert Winkler Wills	1877
147	Edgar Reid	,,
148	Herbert Brassey	,,
149	Joseph Hutton Freeman	,,
150	Harry Love Balstone	,,
151	William Field	1878
152	Robert Hampden Squirrell	,,
153	Ulrich Vernon Herford	,,
154	Samuel Edgar Forbes Ogden ...	,,
155	Francis Roper Fourness-Brice ...	,,
156	Harold Ernest Allen	,,
157	Edgar Arthur Allen	,,
158	John Kenrick Wellbeloved	1879
159	Henry Gordon Nordaby	,,
160	John Gladstone	,,
161	Edgar Haworth Berry	,,
162	Hugh Stuart Greg	1880
163	Clement Hughes	,,
164	Anthony George New	,,
165	Andrews Crompton	,,
166	Walter Irving Allen	,,
167	Harry Arthur Paget	,,
168	Lucas Thomasson	,,
169	Jens Henrik Raundrup	,,
170	Charles William Satterthwaite ...	,,
171	Bernard Russell Wills	,,
172	Randal Hibbert	,,
173	Walter Alcock	,,
174	Harold Thirkell Hibbert	1881
175	John Shackleton Mathers	,,
176	Richard Rowland Parke Wearing ...	,,
177	William Thomas Wearing	,,
178	Percy Gulliver Roberts	,,
179	Arthur Brooke Aspland	,,
180	Georg Peter Raundrup	,,

181	Daniel Titus Thomas	1882
182	Richard William Wearing	,,
183	Charles Welby Scott Worthington ...	,,
184	Thomas Buxton Hardie	,,
185	Francis Theodore Talbot	1883
186	George Reginald Talbot	,,
187	Vivian W. Hardie	,,
188	Walter Smedley Thomson	,,
189	Charles Wicksteed Armstrong ...	,,
190	Arthur Cliff	,,
191	Athelstan Rendall	,,
192	Henry Whitman	,,
193	Harold Spenser Ellis	,,
194	Oliver Dendy	,,
195	Basil Hugh Greg Ronalds	1884
196	Maxwell Michael Pearson	,,
197	Frank Cartwright	,,
198	Joseph Hartley Wicksteed	,,
199	Alexander Wicksteed	,,
200	Walter Curzon Shepherd	,,
201	Sidney Assheton Allen	1885
202	Percy Moberly Allen	,,
203	Hubert Bell Allen	,,
204	Harry Howard Smith	1886
205	Franklin Thomasson	,,
206	Edgar Mason Taylor	,,
207	Gordon Swinton Boult	,,
208	Fielden Hodgson	,,
209	Reginald Bramley Van Wart ...	1887
210	Richard Harold Armstrong	,,
211	Robin Roscoe	,,
212	Ernst Conze	,,
213	Archibald Nettlefold	,,
214	Samuel Arthur Wicksteed	1888
215	Alfred Talbot Cliff	,,

THE ORIGIN OF THE SCHOOL.

By W. H. HERFORD, B.A.

My dear brother and friend,, Mr. Davis, desires me to write an account of my school at Lancaster. This first school, begun by me in January, 1850, was the nucleus of Castle Howell School: it was directed by Mr. Davis and myself, as partners, from 1852 to autumn, '54, and resigned to him at the end of 1861.

Any gift which I had for teaching must have been inherited from my mother, who, an artist by temperament and training, became a teacher through circumstances. She venerated Aikin, Barbauld, and Edgeworth, British pupils of Rousseau's "Emile," but possibly knew not Pestalozzi or Fröbel, even by name. From all that I remember of her, she would have sympathised with these Apostles of Education: her aims would have coincided with F. Fröbel's "Harmonious Development," and her methods with his "Learn by doing"; as with Pestalozzi's fundamental thought, which was, to bring young senses and minds into closest contact with objects and with facts in place of mere words. My own school days were fortunate in that I was never at a bad school, or under a bad master. Yet I realized sufficiently that many ways and means of education needed amendment. At about fifteen, when a pupil of the late Dr. Beard, I first learnt by experience that "lessons" might be made interesting to scholars. After eight years of college life —partly in Germany—and a year's service as Minister, I became for one year tutor to Ralph King, young grandson of the late Lady Noel Byron. She was familiar with the best ideas of Reformed Education, and had been on terms of friendship with Emanuel von Fellenberg (184–), founder of the schools at Hofwyl, near Bern. In conversations upon the best method of training her grandson, she dwelt on the importance of unfolding in due proportion and

succession all powers of body, mind, and soul. She made me see the uselessness of trying to communicate, to my pupil, ready-made results, and agreed that complete education is not possible unless where numbers are trained together.

In midsummer, 1847, Lady Noel Byron asked me to take her grandson to Hofwyl; and there during a stay of four months, I gained the most precious training for myself. Hofwyl had been, during a generation, the Lighthouse of Humane Education in Europe.

Much that we endeavoured afterwards to carry into practice at Lancaster was learned from conversations with Mr. Wilhelm von Fellenberg, and from observation of plans at the Institute of Hofwyl.

1. All prizes, place-taking, merit-marks, etc., in a word, all artificial competitions were put aside as hurtful and needless: hurtful—because they nourish selfish feelings, pride and vanity and the rest, which are ready enough to grow without being helped; and needless, because all human faculties will work, and enjoy working, if you give them proper work to do, and time to do it in.

2. Having set aside artificial competition in our school, we tried to make it a small Commonwealth, by carrying on government, as far as possible by means of the pupils themselves. We consulted them openly, besides tacitly considering their wishes; but we never let it be forgotten that the teacher is in the parents' place. This rudimentary self-government was a genuine moral-training, founded on the conviction that average human nature deserves trust, and that children ought to be treated with confidence till found undeserving. Our experience fully bore out this conviction, because trust was accompanied by provident care not to expose young virtue to trials beyond its strength—in word and deed.

3. It is right to add here that I know, by information from various sources received since I gave up the work at Lancaster, that we wrought with success against the rise and spread amongst

us of that leaven of impurity, which—be it thankfully acknowledged!—is much less prevalent in Boys' Schools of to-day than it was in those of fifty years ago. This was accomplished partly by putting in place of espionage, a constant association of the Teachers with the Pupils, as much as was possible on the model of family life; by arranging virtual solitude for each boy in the sleeping arrangements; by providing for abundant fresh air and physical exercise; and by precluding all undue mental strain. We sought every natural and wholesome bodily recreation; play, country walks and gymnastics, skating and bathing (in their seasons); carpentering and drilling, (whereto, after my time, as soon as the safety of good town baths permitted, swimming was added) as parts of the weekly routine.

One institution imported from Hofwyl is that which all old Lancaster boys are certain to regard as among the brightest recollections of their boyhood. This was the journey to the Lakes in the hopeful month of May. Never to be forgotten are those sweet spring mornings, when after a hearty breakfast at four a.m. at Lancaster, a railway journey to Windermere, and a five-mile walk, we seemed to have spent a pretty long day already, when we sat down at half-past eight to a second breakfast at Ambleside.* These annual expeditions lasted but three days: yet parent and teacher will know that their safe adventures, the climbs and walks, boating on the lake, learning to love Nature by examining flowers and observing birds, the comradeship between teacher and pupil, did foster growth and unfolding of body, mind and soul.

With entire conviction I have put first physical training, which was positive and conscious; and moral training, which was chiefly negative and unconscious; because both of these are within the true teacher's competence to effect. Religious training must

---

* [For many years the charm of these early hours has been reluctantly given up, as it was found that the shortened sleep in some cases seriously lessened the benefit derived from the excursion, and that the excitement of anticipation made early bed the night before a vain expedient.—D.D.]

be the greatest anxiety of a teacher, when, as in a Boarding School, it necessarily has to be attempted in parents' place. We based ours upon the daily reading together of the N. T., along with Sunday's public worship, and with evening readings calculated to foster a true humanity, based on the human character of Jesus Christ.

Of Intellectual Education there is less to say. We undertook to give a "sound Classical and Commercial Education,"—making thoroughness our aim rather than extent of knowledge. We endeavoured so to teach that each mind should work for itself, and learn to enjoy working: to see that no matter of learning should be committed to memory without being, so far as possible, comprehended. We tried to make love of study grow by what it fed on; to reduce inevitable "husks and sowthistles" (J. Milton) to the smallest possible quantity, and to show some of the beauty and sweetness which nature holds under the austere form of science. From the experience, which is everyone's, that little is retained by the adult of what the child is thought to learn, we concluded that, during childhood, all subjects should be taught chiefly for the precious seeds which they contain; and that the manner of teaching is of more moment than the matter.

Looking back to the experiences that ended a quarter of a century ago, I recollect with sorrow a hundred instances where the teacher himself was not "sufficient for these things." I recall nothing to indicate that the principles from which we set out were erroneous; or that our methods, though doubtless inadequate, were wrong.

THE ORIGIN OF THE NAME OF THE SCHOOL.

By D. DAVIS, B.A.

Before coming to the name of our School, I go back to my first connection with it, after glancing at the antecedents which led me to enter on the work.

My own school days, after early instruction by my father, were spent partly in my native town, Evesham, as a day pupil of the Rev. H. B. Whiting, a Cambridge graduate of considerable distinction, to judge by the University prizes which gleamed on his bookshelves, and partly in Birmingham, as a boarder with the Revs. Hugh Hutton and J. R. Wreford, who were partners in a day school. Mr. Whiting was a man to be gratefully remembered. Our minute analytical reading of English classics (almost the only lesson in which I joined the rest of the school, chiefly farmers' sons much devoted to land-surveying) was full of interest and instruction, and was indeed essentially an anticipation of the more elaborate grammatical analysis which now prevails. Mr. Hutton had previously taught the insufficiency of 'Lindley Murray' as a grammatical text-book. Mr. Whiting showed practically how rich in instruction a simple English lesson may be made by a cultivated mind. I am further indebted to him, not only for making clear the initial difficulties of algebra by a full verbal method of his own, but for scholarly instruction in the Greek and Latin Classics, aided by frequent reference to illustrative books which, varying the regular routine of translation and retranslation, made every lesson a source of real pleasure.

Passing from school to college, I had the privilege in my second session at Manchester College, York, of attending with my fellow student and future colleague at Lancaster, W. H. Herford, exhaustive classical readings with the Rev. John Kenrick, to whose editions

of Zumpt and Matthiæ Mr. Whiting had introduced me. We were again classmates at Manchester New College under Professor Francis Newman. It would be impertinence to attempt to characterise the instructions of two such eminent scholars, so like in the fulness of their stores, so different in their methods of imparting them; I can simply record the grateful admiration which the retrospect ever rekindles.

The curriculum of Manchester New College as re-constructed in 1841 was far more complete than that of the old universities, and was not unworthy of comparison with that of Owens College, of which it was in some points a premature anticipation. Could a prevision of my future have been granted I should doubtless have devoted to the physical sciences more study than I then thought justifiable.

My first call to the work of teaching came unexpectedly. While labouring under my first congregational charge at Whitby, the offer of a private pupil was made and accepted. Dissatisfied with the School books to which I had been accustomed, I was, perhaps, somewhat too ambitious in the selection of text books; but with a single pupil it was possible to correlate the forces so as to work satisfactorily. I learned, however, that books at best must be only regarded as merely mechanical aids to the teacher, and that he himself, by adapting, supplementing, and expanding, must supply the motive power to act upon the mind of the pupil.

This first tutorial essay was cut short by entrance upon a more considerable congregational charge at Stockport, to which after a time I added the instruction of a few boys as day pupils. While prosecuting these two-fold duties, each sufficient to task a mature man's whole strength, my health gave way, and I was obliged to give up all work.

A fallow interval of several months renewed my strength, and one of Dr. Williams' Scholarships partly supplied me with the means of again becoming a student at the Univcrsities of Bonn and Jena. At Bonn, in addition to theological courses, I attended the lectures of Professor Kinkel, chiefly for the sake of the language,

his clear and musical enunciation of which was perfect, while his melodious voice added a charm to his eloquence which it is ever a delight to remember. At Jena I heard the church-history course of Professor Hase—a full exposition and expansion of portions of his marvellously condensed text-book, and was introduced by Professor Otto to ancient MSS., that I might be qualified to furnish him with collations of the Claromontane MS. of Athenagoras and Justin Martyr for his edition of the Christian Apologists.

To a third of the Jena professors, Dr. K. V. Stoy (author of "Encyclopädie der Pädagogic," &c.) I am indebted for the opportunity of noting in his large school how rich in fruits wide theoretical knowledge and principles become when judiciously applied by an energetic and practical mind. Even a day spent in passing from class-room to class-room, and from class-room to playground in such an institution, is a revelation to an ordinary English teacher. The comparison of the results there manifest with what we in our, we may hope passing, ignorance, have been too long contented with, is somewhat mortifying to our insular self-satisfaction. Such a visit shows at once how much more potent is the eye when directed to the class than when rivetted to the class-book, and how much more readily the interest and the intellect of the pupil are aroused by the mind and voice of the teacher than by the printed page. Happily the interlacing of intellectual and practical education is no longer unknown in this country. It may be a question whether in the playground the English cricket and football do not develope a finer and more independent manliness than the military exercises which prevail on the continent, although the latter have the advantage of more equally benefitting all.

My return to England and endeavours to enter again on ministerial duty, resulted in a second breakdown of health, and another long interval of enforced idleness. For complete recovery I am indebted to the friends, the climate, and the work I found in Lancaster.

Late in the year 1850 my college friend, Mr. W. H. Herford,

already become my brother by marriage, wanted help in his combined charge of the St. Nicholas Street congregation and of his recently established school, and I came to Lancaster, first tentatively as his assistant; and ultimately, when we found our common work happy and successful, I joined him as co-pastor of his flock and partner in his school.

The house in West Place where the school began, is now a supplemental part of Westfield House, the residence of Sir Thomas Storey, the intervening space which divided it from its greater neighbour having been built over, and the whole connected by passages. The happy memory of those early days flashed vividly upon my mind when, recently, as the alterations were being shown to me, we passed from the richly appointed halls and reception rooms, made beautiful by treasures of art, into a plain business apartment which I recognised at once as the room in which I first taught at Lancaster.

It is indeed pleasant to remember my initiation into the work to which the greater part of my remaining life was to be devoted. What, single-handed, I had before found too much for my strength, was comparatively easy when divided with a congenial fellow-worker. Educational problems with which I had been struggling in the course of my previous tutorial efforts, were practically solved; I found principles laid down, plans formed; and now labour was suitably apportioned so that each without distraction could throw his whole strength into his allotted contribution to a complete realisation of the whole scheme.

The work prospered and the school increased so that the house in West Place was no longer sufficient for its requirements. Then came the migration to Queen Square, from which there has been no further move. The boys of that generation will perhaps most vividly remember how two of the wooden walls of the old play-room, which stood at the end of the garden in West Place, were replaced by stone walls in the corner, near High Street, where it was re-erected, and how this one change for the worse was more than compensated for by the beeches, birches, elms, and horse-

chestnut trees which in summer gave their grateful shade to parts of the playground. They will remember, too, how the transformation which was the work of the first half-year, busied many hands; how destructive tendencies revelled in demolition, and the constructive laboured in piling massive rock-work behind the summer house, left forlorn by the pulling down of the garden wall, the massive coping stones of which were humbled into paving a footpath from house to playground.

The passing years have wrought no little change. The old birches are gone,—most regretted the slender hollow birch beside the steps into the playground, in which year by year the robins reared their young, unscared either by noisy games, or by the passing peeps upon the privacy of their family life. The cartroad at the foot of the slope behind the summer-house, has disappeared, the level of the playground extending now up to the summer-house itself, and covering the site of the rockery. The elder-bush has survived burial in five feet of soil, and the little trees planted in the interstices of the rockery have attained a goodly growth, which rivals in height their older neighbours, while the hawthorn, now a tree, spreads its broad shade over a playground seat.

Subsequent changes will be noted in another paper.

To us teachers the growing prosperity of the school was accompanied by deepening interest in the practical development of our principles and plans on a larger scale.

I look back on those first years at Queen Square as among the brightest of my life, culminating as they did in its crowning happiness. Some who were at school in 1853 may remember their opportunity of practically testing the comparative merits of English and German wedding cake. The confections of the two nations will suggest the other memories, not less pleasing and more important, which mark that period when the study became the abode of a bride. These, however, must be only thus cursorily alluded to, or this scholastic narrative will take to itself wings and soar into heights only to be successfully attempted under the guidance of the Muse. Here it must suffice

to state the prosaic fact that the prospect of increasing family responsibilities opened to view the necessity of a change which was effected in the following year—1854—when at Midsummer I left Lancaster to enter on the charge of the Octagon Chapel, Norwich.

The seven and a half years spent in the East-Anglian Metropolis were, however, destined to be only a break in our Lancaster life. In the autumn of 1861 my brother, who, ten years before had invited me to Lancaster, and shortly after made me his partner, resolved on removal, and proposed to me to take the school as his successor. As I had again found at Norwich the combined work of the pastorate and the school-room occasionally too great a strain on my health, I determined to accept his offer, and in January, 1862, again took up my old work in Queen Square, and have carried it on up to the present time with undivided responsibility, until joined by my son nearly five years ago.

This step was not taken without full consideration of the interests and duties involved. The question especially arose whether I should be justified in ceasing the active exercise of the ministry, for which I had been trained by Manchester New College, and I came to the unhesitating conclusion, that though no longer in charge of a single congregation, I should be doing a kindred work for those who would in course of time become centres of influence in many.

Reviewing now the years that have passed since the resolve to return to Lancaster was taken and acted on, I can only say that it has been my endeavour to carry out to the utmost of my power the principles and plans in accordance with which I first entered on the work in conjunction with my partner, Mr. Herford, and which he has so clearly and concisely set forth in the latter part of his contribution to this volume. The boys of several generations will, I am sure, remember with pleasure, as I do with gratitude, the monthly visits which he paid to test the work of the school by oral examination of the several classes.

More than thirty-eight years have passed since the foundation

of our school, and no sufficient inducements have hitherto presented themselves for removal from the ground in which it has been planted. Though Lancaster is not by any means central as regards the country at large, it is within a single day's journey from the most distant parts, an advantage not possessed by the schools of former generations. On two occasions I have been led to consider the advisability of migration to other localities. The late Mr. Francis Morton, when resident at Malvern, very strongly urged me to go there. But though familiar with the advantages of that famous health resort of my native county, I had no hesitation in preferring Lancaster, as having a climate on the whole more desirable, inasmuch as we do not here suffer from the exhausting heat of the summer months; and although our rainfall is somewhat greater, there is, I believe, compensation in the greater healthiness of rainy periods. I was led to this conclusion by observations made when attending the house-committee of the Dispensary, noting a diminution in the number of cases at times when more rain fell.

A few years later the Rev. J. H. Hutton, when relinquishing the school in which he succeeded Mr. Malleson, gave me an opportunity of removing to the Old Hove House, at Brighton. The remembrance, however, of a winter vacation spent at Brighton towards the close of Mr. Malleson's time, when I found the cold much severer than I have ever felt it at Lancaster, combined with unwillingness to leave a freehold of my own again to become a tenant, determined me not to make the suggested change, especially as I considered that we had been sufficiently long rooted in Lancaster to dispense with the possible advantage of Hove tradition.

Nevertheless, I have been so fully alive to the fact that the revived prosperity of Lancaster as the seat of new and increasing manufactures might possibly make removal desirable that I have persistently avoided giving the school a name which might identify it with any particular locality rather than with myself personally. For a considerable number of years e.g. my boys were entered in the Matriculation lists of the University of London as pupils of my school at Lancaster. One year I was surprised to find 'Private

Tuition' substituted for the customary designation. On inquiring the reason I was informed by the clerk that the regulations of the senate did not allow any other entry than 'Private Tuition' for pupils coming from schools without a name. I was thus led to cast about for a name for the school as movable as my own, and am now brought at once to the subject which heads this paper.

Nestling among the grassy hills of Cardiganshire is an old farm house called Castle Howell, the English form of the native name Castell Hywel. The present peaceful and unpretending aspect of the place gives no indication of its former history. In Rees's "Cardiganshire"* is found (p. 501–2) the following notice:—

"It forms at present a part of the Allt yr Odyn estate, and has for several years been occupied as a farm house. One of the manuscripts in Mr. Lloyd's possession contains the following particulars relating to this place:—

"'Kadivor ap Dinawol, a man of great valour and conduct, having taken the castle of Cardigan from the earl of Clare and the Flemings, by Scalado, was honoured by his prince, who was also his first cousin (viz., the great Lord Rhys, Prince of South Wales), for that service with these arms, (viz.) sa. a spear's head, imbrued inter three scaling ladders arg. on a chief gu. a castle triple-towered of the second. He was also rewarded with divers territories, and entitled Lord of Castle Hywel, Pantotrimon, and Gilvachwen, in the parish of Llandyssil, in the county of Cardigan; he married Catherine daughter of Lord Rhys.'†

"Gwylim Lloyd of Castle Hywel, the sixth in descent from Cadivor, is supposed to have been the founder of the first mansion on this property. He lived in the reign of Edward the Second, and was the first of the family who had a surname.

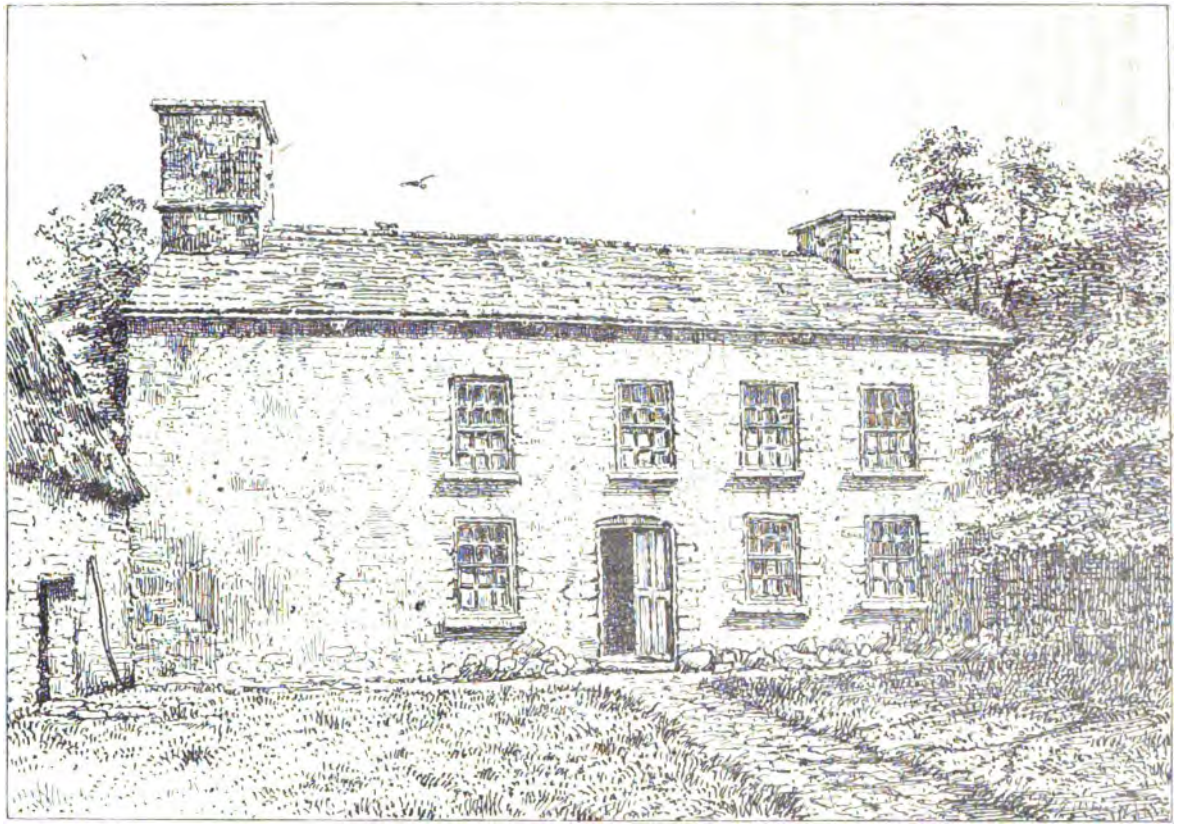
"Dafydd ab Llewelyn Lloyd of this house, and the fifth in descent from the above named Gwylim, was the first knight for the shire after the Act of Union in the reign of Henry the Eighth.

"Near the river Cletyr, a short distance from the house, is a moated tumulus, which indicates the site of the castle from which this place derived its name. It was originally designated Humphrey's Castle, and is so called in the

---

* A Topographical and Historical Description of Cardiganshire, containing an account of its Towns, Castles, Antiquities, &c., &c. By T. Rees. Illustrated with Engravings. London: Printed for Sherwood, Neeley, & Jones, Paternoster Row. 1810.

† Meyrick's Cardigan, p. 149.



Castle Howell, Cardiganshire.

Welsh Chronicles, having been probably built by some Norman adventurer of that name. In the year 1150, Hywel, Owen Gwynedd's son, strengthened this fortress, and called it after his own name.

"The passage of the river Cletyr, below the Allt yr Odyn arms is called Rhyd Owain, or Owens-ford; a name which it is thought to have acquired from having been crossed at this spot by Owen Gwynedd in one of his invasions of South Wales. A barrow close by is denominated Tommen Rhyd Owain, where it is probable the dead were deposited after some engagement here."

The valorous Cadivor and his descendants would not, however, have led us to note either the scenes of their prowess or the fortresses they built. Castle Howell, as we know it, no moated stronghold with battlements and towers, but a plain farm house, without any trace in its tranquil appearance of the wild warlike times in which it had its origin, became the residence in the latter half of last century of a man whose avocations were more useful if less lavishly rewarded than the scaling of castles.

The late Dr. Thomas Rees, of Swansea, in his "History of Protestant Nonconformity in Wales,"* (pp. 473–5) has the following notice of

DAVID DAVIS, of Castellhowell.

"This celebrated person was born at Goetre Isaf, near Lampeter, Cardiganshire, in the year 1745. His parents were eminently religious persons and members of the Independent church at Cilgwym, then under the pastoral care of the excellent Phillip† Pugh. Mr. Davis attributes his first religious impressions to his father's prayers in the family, and the affecting sermons of his venerable pastor. He says that he began to pray with deep earnestness in the eighth or ninth year of his age. He had a strong desire from his childhood to be a minister of the gospel. In the year 1758 he was placed under the instruction of his relative, Mr. Joshua Thomas, of Leominster, where he continued for a year and a half. The pious instructions and holy example of that excellent minister greatly deepened the impressions of the evil of sin and the beauty of holiness on the tender mind of his pupil. After his return from Leominster, he spent some time at a grammar school at Llanybyther, and afterwards at the

* "History of Protestant Nonconformity in Wales from its Rise to the Present Time." By Thomas Rees. London: John Snow, 35, Paternoster Row. 1861.

† Sic. The superfluous letter is left (qy. a mis-print) in this name, but removed from the name of the subject of the notice, which is given as in his own letters and publications.

school of Mr. T. Lloyd, vicar of Llangeler. In the year 1765 he was admitted to the academy at Caermarthen, then under the presidency of Dr. Jenkin Jenkins. While there, he lost, according to his own testimony, most of the religious impressions of which he had been the subject from his eighth year. It is probable also that he there imbibed those loose and indefinite doctrinal notions which he retained to the close of his life. It is impossible to say what was his creed. By some he is reckoned among the Arminians, while others assert that he was an Arian, if not a Unitarian. In a letter to a friend he says, 'I am perfectly satisfied in my own mind that Dr. Priestley, and others of his party, may be good and pious Christians; I have also the same opinion of John Calvin, Dr. Crisp and their disciples. I would cheerfully sit in the same communion with them, with the delightful hope of being in their company for ever in heaven.' It appears that he laid not the least stress upon a man's sentiments. He associated more with the Arians and Unitarians than he did with the Orthodox party, probably because that party would not associate with him on account of the indefiniteness of his creed.

"Soon after leaving the academy, Mr. Davis settled as a co-pastor with Mr. David Lloyd at Llwynrhydowen, Penrhiw, and other places, in Cardiganshire. He was ordained July 15th, 1773. On the 15th of December, 1775, he married Miss Anne Evans, of Voelallt, Ciliau-Aeron, and some time after took up his residence at Castell-howell, where he spent the remainder of his days. Here he opened a classical school, and soon became the most celebrated and successful teacher of youth in the Principality. The gentry, as well as the farmers, sent their sons to his school. A vast number of young men, who rose to positions of importance and eminence, in both the church and the world, were indebted to him for laying the foundation of their greatness.* Most of the clergy, as well as the Dissenting ministers, of that part of the Principality, were educated under him. Dr. Horsley, when he became Bishop of St. David's, felt mortified to find that a Nonconforming minister was the most celebrated tutor in the whole diocese, and to give vent to his spleen, he gave out that he would not ordain any

---

* Note.—When a student at Manchester New College, I had the pleasure of hearing from the lips of one of his pupils, the late Mr. Edward Loyd, the banker, of Cheetham Hill, the uncle of Lord Overstone, the affectionate respect with which he cherished his memory. Mr. Loyd took great pleasure in talking over the old times at Castle Howell, and recited with gusto some verses (almost the only Welsh he remembered) in which a poetical tailor, who periodically did work for the house in the same large attic in which the boys prepared their lessons, lampooned the young students, among whom were Mr. Loyd himself and my father, the Rev. T. Davis, of Evesham. One day between lunch and dinner, Mr. Loyd took me to a point from which he showed me the direction in which Dob Lane was situated, the place where his brother, Lewis Loyd, the father of Lord Overstone, was minister before he became a banker.

of Mr. Davis's pupils: that possibly affected his school to some extent, but the Nonconformist's character, as a tutor, was now too well established for the Bishop's bigotry to render it any material damage.

"After a life of extraordinary usefulness, especially in the capacity of schoolmaster, Mr. Davis died at the advanced age of 82, July 3rd, 1827.

"He was a celebrated poet. His translation of Gray's Elegy is incomparably superior to the original. He published a volume of his poetical compositions in 1822, under the title "Telyn Dewi," i.e. David's Harp. It has since passed through three or four editions.* This, and a translation of Scougal's "Life of God in the Soul of Man," are, we believe, his only contributions to Welsh literature.

"A more benevolent, kind-hearted, and inoffensive man than Davis, of Castellhowell, never lived. 'He was the very soul of kindness and fine feeling.' His fear of wounding the feelings of his fellow-men was probably the reason why he was always so cautious not to introduce any controverted points into his sermons, for which his Unitarian biographer blames him, taking for granted, we suppose, that, had he preached on any doctrinal subject, his views would have been favourable to Unitarianism. Mr. Davis had two† sons in the ministry among the Unitarians—Mr. D. Davis, of Neath, and Mr. Timothy Davis, of Evesham. The latter we believe is still living."‡

---

* If so, unknown to his family; with their approval a new edition was published in 1876, "Telyn Dewi; sef gwaith prydyddawl y diweddar Barch. David Davis gynt o Gastell-Hywel, Ceredigion,—Ail Argraffiad, gydag Ychwanegiad.—Llanbedr: Argraffedig a Chyhoeddedig gan J. Davis. MDCCCLXXVI.

† A third son, Thomas, was also a Unitarian minister, but died comparatively early.

‡ The subjoined inscription on a marble tablet in the Oat Street Chapel, Evesham, records the date of his death:—

IN MEMORY OF
THE REVEREND TIMOTHY DAVIS,
WHO WAS BORN AT CILIAU-AERON, CARDIGANSHIRE,
ON THE 20TH NOVEMBER, 1779,
AND DIED AT EVESHAM ON THE 28TH NOVEMBER, 1860.

HIS PUBLIC MINISTRY EXTENDED OVER 55 YEARS,
OF WHICH ELEVEN WERE SPENT IN WALES,
NINE AT COVENTRY,
AND THIRTY-FIVE, TERMINATING MARCH, 1854, IN THIS PLACE.

THIS MEMORIAL OF
THE DEVOUT LIFE AND PRACTICAL TEACHINGS
OF A FAITHFUL AND AFFECTIONATE CHRISTIAN MINISTER
IS ERECTED BY
THE MEMBERS OF THIS CONGREGATION.

Mr. Walter D. Jeremy, in his volume on the Presbyterian Board and Dr. Williams's Trust, has also an appreciative notice (pp. 52–54) of the 'Poet and Divine' of Castle Howell, from which the following extract may be taken as supplementary to the brief memoir of Dr. Rees: "His readiness in Greek has been illustrated by an anecdote. In 1809 a ship from the coast of Greece was driven by a storm to Aberystwith, with twenty-four hands on board; the scholar of Castle Howell was sent for and conversed with them in their own language. One of them, pointing to the captain, said, 'that is my brother'; on which Mr. Davis replied, κα·γὼ ἐιμὶ ἄλλος ἀδελφὸς ὑμῶν (and I am another brother to you both), which at once won their hearts."

When the desirability of giving a name to our school was, as I explained, forced upon me, the family traditions of Cardiganshire suggested a solution which would meet all the requirements of the case, and I resolved to call it Castle Howell School. The fact that this name has no local connection with our present site, made it preferable to one which might have been naturally taken from the Lindow estate, whereon it stands, had not such a title been liable to confusion with that of another long-established school. Our own family name was chosen because it can migrate with us if we or our successors should be induced to settle elsewhere, and because it is associated with educational objects not necessarily connected with any particular locality.

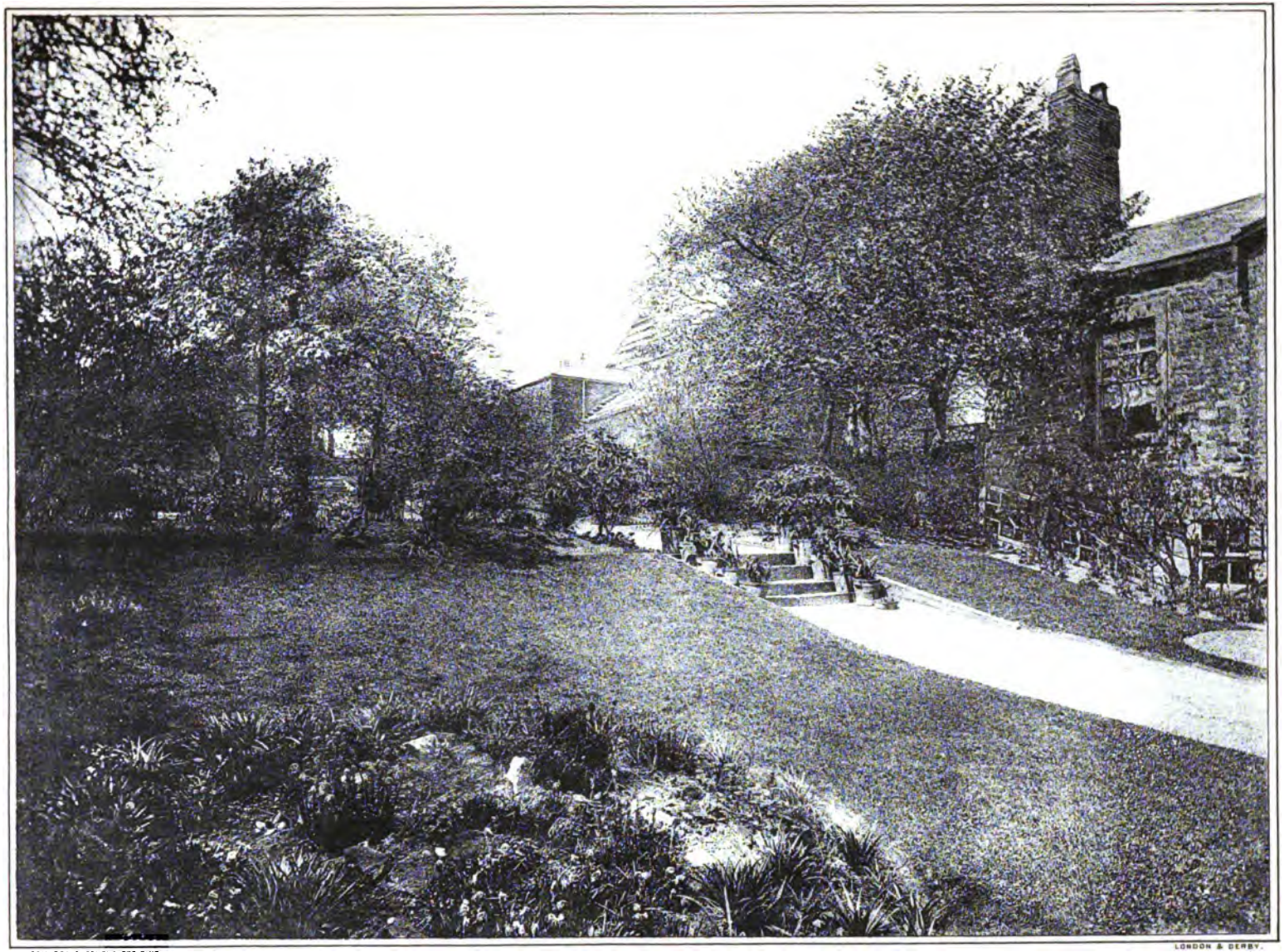
It struck me, too, that as from the very first it has been our endeavour to blend home feeling with school duty, and as the realisation of this endeavour must necessarily be dependent on the spirit of the lady who presides over the domestic establishment, the name chosen was a tribute to the gracious influence of my sister, whose memory will, I doubt not, touch many a tender chord in the hearts of those who recall the early years in West Place and Queen Square.

This thought came to me the more naturally because I feel so deeply the debt of gratitude due to the partner of my own life for

the measure of success which has attended our labours, a feeling which I know is shared by many of those to whom she has been for a time during more than a quarter of a century in loco parentis.

In this connection I cannot think it irrelevant to say that the traditions of her family also might have furnished a good name for our school. In the educational records of Germany the name of 'Arnold' held an honourable place long before it shed its lustre on Rugby. While the Cardiganshire patriarch was making Castle Howell a centre of scholarship in Wales, 'Onkel Arnold' was head of the Ritter-Academie at Brandenburg a. d. Havel.

But enough on this topic. Without a name, and with a name, the school has been my life. I must refrain from even touching on the lights and shadows, the hopes and fears of its history. It is time for me to pass on the torch into the more vigorous hand and fresher energies of the next generation.



BEMROSE & SONS. PHOTO-TINT. LONDON & DERBY.

THE GARDEN, CASTLE HOWELL SCHOOL.

SOME CHANGES IN THE SCHOOL SINCE 1862.

By RUDOLF DAVIS, B.A.

This is a book for Old Boys written by Old Boys.

The form of this first sentence suggests a Memory Picture. Who that was at Lancaster at the time has forgotten the sublime contempt with which we heard, somewhere in the second half of the sixties, I think it must have been, that a certain monthly magazine for Boys was to change its title, and become "The Young Gentleman's Magazine," because, forsooth, as was set forth in the prospectus, it was written by Gentlemen for the Sons of Gentlemen! And has anyone who was an actor in the scene forgotten how, upon the arrival of the first number of the only copy of the newly-entitled periodical that was kept on (for there was no Paper Club in those days, and other subscribers transferred their subscriptions to the other Boys' Magazine) it was quickly seized at the extreme corner of an inside sheet, and held aloft between the tips of thumb and first finger of one hand of one of us, the corresponding parts of his other hand daintily closing his nostrils, as though the unhappy publication were saturated with pungent poison deadly to true boyhood, while every muscle of his face expressed disgust, which would have been terrible if it had not been supremely ludicrous? Quickly it was snatched by another from the hand of the leader, and sent flying to a group at the other end of the verandah. They opened to let it pass, as though it were red-hot, and it fell to be kicked. "Get out!—I don't want the dirty thing:—send it to an Academy for Young Gentlemen." "Ugh! Don't touch it." Another takes a drop-kick at it: "Look out, you chaps,—here it goes to somebody's Seminary for the Sons of Gentlemen." Probably none of us had then heard of the Gentleman's Magazine, and if we

had, there was at any rate an unfortunate ambiguity about the new title.

This is a book for Old Boys, written by Old Boys. There are exceptions to prove the rule. (Does any Old Boy remember having heard that before? Your successors do not hear it.) Mr. Herford and Mr. Davis do not write as Old Boys. I am in the unique position of being able to choose whether to write as an Old Boy or as Mr. Rudolf,—otherwise 'Rudie'; e.g. "I say, Monkey, go and ask Rudie whether he set the history in class, that's a good chap; I can't remember, and Tombs doesn't think he did." Let me for the nonce drop the *Paidagogos* and for auld lang syne become again the *Pais*, for this is an Old Boys' book.

Before setting to work, may I be allowed to suggest the point of view from which I would ask the reader to approach my paper. It is not possible to 'speak upon paper' about one's old school and school-days in the way in which one would write upon any other subject literary or scientific. Though we successfully check any inclination to idealisation,—and no period of our life is more liable to idealisation that that of our schooldays and childhood generally, and not only because it is our past most distant from the present,—yet the memory of the ungarnished reality is so beautiful, so dear to us, that we can scarcely approach the subject without becoming conscious of, maybe an unwonted, radiating glow of comradeship, a joy in the remembrance of how many others long scattered over every part of our earth, or long separated from us in more distant parts of the yet greater world of life, though an hour or two in a train could any day bring us together, have shared with us some of our most precious experiences. But this book will be read by many generations of Old Boys: by those who were at Lancaster early in the fifties and have become the fathers of Old Boys, and by those who have just left in this 1888. Nearly half the Old Boys are known to me only by name,—and even the names of some are unknown; and of my own schoolfellows, among whom I count those with whom, while teaching them, I have learnt more than books can teach,—the truest, most beautiful wisdom of life,—many

were going to the Universities when I was scarcely out of petticoats. My difficulty is that I cannot write in the same manner for all these generations. Some of my readers would be met with the firm, warm, lingering hand-clasp of closest, truest friendship; to others I should need an introduction, to be followed by a formal bow, an interested glance, and perhaps a diffident silence. To some I can write any thought or memory of the old days without suspicion of being misunderstood; from others it would be proper for me to preserve that respectful, indefinable, distance which is supposed to fitly separate writer and Reader, but which I at any rate cannot preserve in writing of old school days. The only way out of this difficulty that I can see, is for my Reader to accept the following suggestion as to his idea of the writer in reading this paper,—or as much of it as he can get through,—for how could I otherwise venture to tell, for instance, the foregoing incident of the Young Gentleman's Magazine, to men unknown to me, and almost old enough to be my father! Forget, then, O Old Boy Reader, I venture to suggest,—Member of Parliament, Deputy Lieutenant, Clergyman, Minister, University Professor, Physician, Surgeon, Solicitor, Barrister, Engineer, Architect, Merchant, Manufacturer, Orange-Grower of California, Farmer of New Zealand, Wool-Merchant of the Cape, Banker of Australia, Servant of Infant-Age-in-Government in the East, or Pioneer in the Wilds of South or West,—forget, as your thoughts once more glide back, with some affection, let me hope, to other scenes of other times,—forget that this is written by the individual whose name will be set at the top, the end, or in the table of contents of the book, an individual who may be an entire stranger to you, or of whom, if you know him, you may not think very much, and fancy it written by some impersonal particular friend of your own. We,—you and the impersonal,—have not met for ages, but now, fishing in Connemara, shooting in Scotland, lazing on an Atlantic liner or on the Broads, getting health on the Riviera, or the necessity of coming again by drinking the waters somewhere or other, in Norway or Paris, Vienna or Naples,—here we meet again; hand clasps hand without

need of question to make sure, for there can be no doubt. A few enquiries — marriage — work — prosperity — and we are at school again. Or the scene is different. We are in some picturesque old-world German town such as the one in which I write. It has not a hundred thousand inhabitants, and is out of the way, so that we are not often enraged and shamed by the sight of those detestable Englishmen who cannot go abroad without making guys of themselves. The garden of the Tivoli theatre is full; a delightful summer evening—the moon not yet up; the coloured lamps join tree with tree in fairy lines and chains, and throw a dream-like light upon the scene; the full orchestra is playing Millöcker's Vienna Traum-Walzer; across the dark water of the great lake on the left glide invisible boats hung overhead with rows of Chinese lanterns, and when the music is still and there is a lull in the talk immediately near, a few notes of a Volks or Studenten Lied are wafted across the water by the gentle wind. The Teuton citizens are seated at the many tables enjoying their Abendbrod, or are promenading in large concentric circles revolving oppositely; so all see all and many German bows are exchanged, the presence of the Meyers and Schulzes is observed, Antonia's dress is criticised, and who is the girl Hans is walking with? Busy waiters flit about edging their way here and there with trays miraculously piled, or return for more with a brisk "Ya wohl!"

Alone at one of the tables a little apart from the rest, in a corner arboured by shrubs, itself dark but near a part of the promenade which is especially brightly lit, so that each passing face and form may be observed, sits one of us, a wandering bachelor. On a table before him a stoup of Bairisches, and beside it a case of grand echte Habana cigarren which do not ruin in Germany—their smoke will drive away the insect world. The waiter has been fee'd, so that he will not by and by hover around in a way that makes the guest feel 'real mean' if he does not call for "noch eins—dunkeles," and the wanderer is set for a couple of hours of music, dreams, and observation, while the beer-drinking nation passes before him. The tub-like paterfamilias, who thinks

nothing of fourteen seidel, with his spouse who manages three while she knits. The spruce commis with his four languages, industry, thrift, and £60 a year; the uniformed beampte—customs, post, railway, and police—greeted with a dip of the hat low in proportion to his rank and the humility or courtesy of his greeter,—the knee is about the lowest point reached; two charming chatting German girls, arm in arm and alone, for whose return in the revolving circle the Wanderer looks with interest; at their heels an upright face-scarred student-medecin of most amusing dignity; an aged stooping absent-minded lehrer in the Gymnasium, at whose approach three boys, with *their* seidels and cigars at a neighbouring table, rise and dip their little coloured caps,—they follow him with their eyes and whisper and smile when he has passed; most of the soldiers are away at the manœuvres; in and out between the groups run little chasing bare-headed children, who ought to be in bed, the boys short-cropped, the girls in pig-tails, all light-haired. Among the men an extraordinary variety in shape and colour of straw hats and fancy modes in hair; among the elder women extraordinary degrees of bad taste or untidiness in dress; among all various degrees of ludicrous pomposity, charming domesticity, and beaming friendliness. But now English voices are heard. They clash against the Wanderer's thought, but he is compelled to look, though expecting to behold another batch of educated, acquisitive 'arries and Mary Hanns. He looks and finds his mistake, looks again at one of the party,—this time hard and with growing excitement. In a moment he is up, his cigar ash falls on his waistcoat, and his beer is flooding the table, but he does not heed, and in another moment he is standing before the Other. "What? *you* old man! Where have you sprung from? This *is* fine! I *am* glad to see you!" Soon the Other has made his excuses to his friends, and the Two are seated together each with his Bairisches. The seidels are touched, the talk begins, and after a time it reaches the school days. Now under such circumstances little things interest, and small incidents recalled lead to others; "Do you remember how A did this?" "Do you know what has become of B.?" "Don't you

remember how when C. first came he always, &c.?" It is in something like this spirit that I write this paper. My subject is 'Some changes in the School,' but I do not propose to write about the changes which are most important,—changes from the educator's point of view—but of those changes which most interest the boys, and perhaps as I proceed memory pictures from various times may appear before me, which I will try to paint in the hope that they may recall pleasant or amusing memories to others; and throughout, so far as I know, I shall use the pronouns 'you' and 'I,'—the impersonal 'I,' and the universal, distributed 'you.'

First the front of the house. There is to be a picture of it somewhere in the book. In the old days the railings were in front of the right-hand part only, and there were no shrubs. The windows on the ground floor on the right of the front door are still the windows of the Two; in the passage leading to them some of the boys change their boots, and in the same passage is the cupboard which used to be the shop cupboard, when shop was held in the ante-room on Saturdays. Above are the windows of the room which used to be the nursery; now it is Mr. Davis' sanctum—too often invaded by other members of the family. On the left of the front door, on the ground floor are the two windows of the study, where the resident masters live. The old yellow semi-grand Broadwood which used to be there has vanished; years ago it was sold to make room for a successor, and did not fetch much! The two windows above are those of the Front-Three, but only two of them are now used as bed-rooms, the third, dignified by the name of music room, contains a piano and is the abode of violins and flutes. You may remember recovering from mumps in these rooms, but now there is another house next door but two on the left of the picture, where Mr. and Mrs. Brown live, and where the masters and some boys sleep, which becomes the hospital in case of need,—a misfortune which happily has not happened recently. The two large windows on the left make the greatest change in the front of the house. That on the right was formerly built up with stone like the ugly rectangular window between the two, which will not

get hidden by shrubs. The place of that on the left was filled by the large wooden doors of the coach-house, and beyond the coach-house was another room, which may have been the saddle-room, with stairs leading to a trap-door into the sevens. The coach-house and saddle-room were, then, side by side against the dining-room. The right-hand of the two windows is that of the dining-room,—formerly dining-room and school-room in one, now dining-room and class-room only when wanted. The room has changed very much. With windows at each end it is much lighter. The pillars at the former dark end have gone; the pigeon-holes, with Q, are in the school-room, and the side-tables with desks; instead of maps there are pictures on the wall, and at one end is a bookcase above a cupboard, in the door of which is the inlaid star which used to be in the front of the old pulpit at Chapel. When this change was made in the dining-room (I forget the year), the wall between the coach-house and saddle-room was removed, and the two together became the school-room. The floor of the saddle-room was about twelve inches higher than that of the coach-house; two steps now join the higher and lower level; on the higher level is the masters' desk, put on to the back of the pigeon-holes, which face the big window, and this part of the room has been found convenient for the stage when there is acting. There have been two or three different arrangements of desks since the room was first used,—but the arrangement is now, and has been for some time, for no boys to sit in the upper part of the room; in that part, lighted by windows above and in the door, are, besides the master's desk, the table for classes, the black board and map-stand. All the boys sit in the lower part of the room, at desks on tables placed so that the light from the big window falls from the left; when it is dark, too, a row of gas jets above the window throws the light from the same side.

At the time these changes were being made, it was not easy to decide how to get to the school-room from the rest of the house, for there was no communication except the stairs to the trap-door into the Sevens; they were out of the question and were removed. It

seemed a pity to make a door in the side of the dining-room, for it would break into the panelling and spoil the room. In the end the method adopted was this. You may remember that the ante-room leading from the hall to the dining-room had two windows looking into the garden and reaching to the floor, in front of the lower part of which in winter a thick red curtain was hung. Of these windows, that nearest the dining-room was turned into a glass door opening into a passage which leads past the dining-room windows to the school-room door. This passage, with tiled floor and glass roof, side and ends, is known as the verandah, though it is more like a long old-fashioned greenhouse, except that Mrs. Davis' flowers are only round it on a ledge, and on the floor in front of the dining-room windows. In it are the boys' pigeon-holes for their odds and ends, their play-boxes, and the table for the papers and magazines the paper-club takes in, and it is a favourite place for reading in before meals and at other odd times. I remember once hearing a noteworthy conversation between two of the fellows as I passed along this verandah; it is some years ago and I forget who one of them was, but I will call them A. and B. A. was lying full length on the bench, face downwards; his elbows rested on the bench, his book between them, his head supported by his hands. B. coming up, sees A. reading.

B. "Hullo, A.,—what are you reading?"

A. *(Rather shy at the answer he has to give, turns half over to face B., and lifts the book to examine the name on the back; tries to speak in an off-hand manner, as if it did not matter a bit):* "Oh,—I don't know"—*(Didn't he?—then with a half-suppressed, or created, yawn)*—"Hamlet, I think."

B. "Oh,—*(pause)*—Shakespeare, isn't it?"

A. "Yes."

B. *(Carelessly, and passing on)*—"Nothing in it, I suppose?"

A. "No, I don't suppose there is,—much."—*(Turns over again and continues reading, relieved.)*

That was before the two Octagon Shakespeare Societies were formed, when at their own wish the juniors read from 4.30 to 6.15,

and the seniors and students from 6.30 to 9.0 every Wednesday.

The windows above the large windows are, beginning at the right, those of the spare-room, the matron's room, and one of the windows of the Sevens. Behind the lamp-post are the gates as they have always been. The low roof immediately beyond belongs to other premises. The building behind contains on the ground floor back-kitchen premises and Thomas', then Robert's, and, for the last thirteen years, Brown's place. On the first floor are rooms which at various periods have been chemistry-room, bedrooms, and hospital, but which are now Mr. Rudolf's rooms: there he 'interviews' and is 'interviewed'; from his windows he has a view of the way up to the playground and of the playground itself.

As to the rest of the house itself, downstairs the shoe-room is as it was; upstairs there is a new bath with hot water always ready. —Wouldn't some of us have liked to let a little hot water into the plunge bath on a cold winter morning in the old times! But in these effeminate days few boys use the plunge bath. The bed-rooms I think are very much the same, except that the boys are allowed to choose a couple of plates, periodically changed, from the London News or Graphic to pin upon the bare partitions. There would be a considerable run on battle scenes and pictures of other horrors, if they were allowed! Several of the boys also put photographs of their home people about their rooms, and interesting, pretty or fantastic ornaments. The drawing-room is a good deal altered in detail, but it is not used so much by the boys now as in old days,— now only for desert and saying hymns on Sunday afternoon, for singing hymns on Sunday evening, and for practices and music lessons during the week. Formerly, you remember, we used to go up stairs in the winter evenings, for games and other occupations when we had done our preparation,—now the boys go into the dining-room instead. The chief occupations now, though many of the elder boys are rarely and in some cases never there, are looking at bound volumes of the London News, any volume since 1864, or Graphic, from the beginning, or Punch, or reading story books,— but games are also played, as chess, draughts, hoppity, pitch-easy,

bezique, jacoby, whist. Worsted work has quite gone out, its place perhaps taken by netting hammocks or nets for fruit trees. Occasional rages occur for cutting out book-markers, &c., from perforated cardboard, painting pictures for scrap-books, and acting. Generally there is some one boy who plays well whose arrival is looked forward to: "Now, A., strike up!" or, "Do play us something, A." The first I remember was Harold Woolley; and didn't he sing 'The Cork Leg'? Now it is Franklin Thomasson. In the old days there used to be a regular evening appointed for the acting,—Friday, was it not?—and the elder boys used to be the chief performers; but now that is impossible; they have too much work to do to be able to spare the time, and the acting is almost confined to the younger boys. A part of the wardrobe of 1862 is still in use, though rather the worse for wear. Some of the Greek and Roman swords, with the name of the maker on the handle, still deal deadly blows and are used by policemen, burglars, brigands, or red-indians. I wish I were near them that I could mention the names on the handles and remind you that you made one. The ass's head for Midsummer Night's Dream lasted a long time, but finally I am afraid the moths got it. There is, however, still in existence and in frequent use a certain pink print dress, which if you have not forgotten the acting altogether, you are sure to remember. Many generations of boys have worn it, and in it have attempted a breakdown difficult to restrain. A pillow is now used for a bustle!

In the cellar under the dining-room is still part of the stock-in-trade of Messrs. New, Ackroyd & Co., though covered now by the dust of ages. In this cellar the firm (I have an idea I was once one of the Co., but perhaps that is a case of a presuming assumption of memory) produced their hymn book, a copy of which I have in the secret drawer of an old desk, and made other interesting additions to our national literature. Did you ever drop a hot cinder on to the printers through the ventilating holes of the dining-room fireplace?

There is no dog in the yard now. You remember Mr. Hoskin's Nelly? Then came Carlo, a slippery hound who kept the neigh-

bourhood awake by howls and whines during the hours that follow cock-crow, and made himself generally such a nuisance that he had to be removed. After him, Boss, a large black retriever often hymned in the "Northern Dawn." Do you remember how round his kennel lay the bones of half a herd of oxen and quite a flock of sheep? Those who had the feeding of him thought him hungry if he was not too sleepy to bark, that is, if he could possibly contain any more; and if he was hungry, of course he must have food; consequently his near neighbourhood was not agreeable. Poor fellow! in the end he died of ancient age,—or a cattle plague. One day we were along the canal in the boat, Boss accompanying us on the tow-path. We rowed to the other side to gather blackberries, and Boss swam across to join us. He put his feet into a wasps' nest and immediately we were in the midst of an angry swarm. Several of us were stung. So was Boss,—twice; in the ribs and on the tip of his nose. How we laughed at him on the way home, and cried 'Poor fellow,' when we saw him suddenly pull up in the middle of the path and savagely gnaw at his side, or in a mystified way try to rub from the end of his nose something which would not go and was not there!

The stables are a good deal changed. In the lower one are still the little compartments for each boy's sticks, garden-tools, &c., but some near the door have been done away with, and in their place is a general receptacle for playground-cricket things and hockey sticks. In the upper one, with its splendid hiding places for 'I spy,' are the clubs, poles, dumb-bells, sham rifles and basket-swords for drilling, the General Fund cricket-box, large net for practising in front of the wicket, and football poles. In the cricket-box are also the boxing-gloves, an addition of recent years with which I have seen some grand rounds fought. I wish they were used more frequently: the physical training, especially for the eye, is fine, but it is finer to see a quick-tempered lad gradually learn to receive a knock-down with a smile. A few years ago the General Fund got so rich that the boys did not know what to do with their money, and subscriptions were reduced. I should not

wonder if they had not to be put up again before long. Beyond the upper stable is a small room which for a long time served as an unsatisfactory chemistry-room, dark and damp. The former chopping-place over the lower stable, refloored and lighted from the roof, makes a very good chemistry room now, large enough for the largest class, where four boys, each with his own re-agents, water-tap, and Bunsen, can do practical work. You and I used to long for a stink-cupboard in the old room sometimes; there is one in the new. Did you ever surreptitiously remove the stopper from the Carbon Disulphide bottle? (I have no chemistry book here to check the name, and know little chemistry, but I mean the rotten-cabbage bottle.) When the new chemistry room was made, the old stairs of unique irregularity leading to the workshop were removed, and with them another favorite hiding-place, known as the cat-hole. The workshop is very much as it was, but the lathe is gone. Some very good work is turned out, but I do not think it is strictly because no indifferent work is done that no silk-winders, boot-jacks, or ends of boxes are nailed to the wall as laughing-stocks or warnings to future generations; probably the present teacher cannot find it in his heart to sacrifice the work of a boy who had done his best, even if it is not good. Do you remember how a splendid teacher of carpentry, whom you may still meet if you walk about Lancaster for a day or two, used to tell inquisitive youngsters it was a 'Willbe' when they asked what it was that an older boy was making; and how he puzzled us? Beyond the workshop was the skeleton-hole, where the stage scenery used to be kept, now the chopping-place, lighted from the roof. Formerly it was dark, and new boys used to be told when they came into the workshop first, that there was a skeleton in the room. The door was slightly opened, and new boy, half eagerly, half anxiously, peered in; door opened wider; new boy pushed in; door shut. 'Not wise,' you and I would say now, in our sapient age; yet I do not remember any harm coming of it; probably new-boy never quite believed in skeleton,—the faces of his companions prevented that,—good actors as some boys are. In the middle of the picture

BEMROSE & SONS, PHOTO-TINT. LONDON & DERBY.

THE PLAYGROUND, CASTLE HOWELL SCHOOL.

of the garden (I am sorry I cannot refer you to the page) which is taken from just outside the verandah, the roofs of the stable are seen. The tree-trunk to the left of the open space which appears about an inch to the left of the extreme left of the upper stable, is that by which Sergeant Grace is standing in the picture of the playground.

The playground is larger than it used to be. In the old days there was a steep grass-grown bank, reaching to the garden, half way between the beech, by which the Sergeant is standing, and the back of the summer-house, which is seen on the left in the picture. That bank has been projected considerably into the former garden, and is topped by railings wired with netting, like those seen beyond the summer-house. When this ground was on the lower level, blocks of stones with ferns growing between them surrounded the back of the summer-house. We called it the grotto, though it was convex, and kept there lizards caught on the moor. In the diagonally opposite corner also the playground has been enlarged. Formerly there were wooden railings stretching from the beech tree behind the third boy from the right as seen in the picture (he has written one of the papers for this book), parallel with the wall against which the seat stands, to the wall behind the flagstaff. This enclosure contained the boys' gardens, but now those boys who wish have pieces of the garden proper given them.

But perhaps the playground is most changed by the absence of four of the five silver birches which in 1862 found room among the other trees. They died one by one, the last about six or seven years ago,—the death of one of them necessitating the removal of the ladder, used as a seat as much as for gymnastics, the upper end of which was fastened to the beech in the foreground on the left of the picture. In losing the silver birches the playground lost its most daintily graceful feature on sunny after-breakfast playtimes in early spring. But I do not think many of us thought much about that. There are now fewer trunks to stop cricket-balls.

Two ancient institutions of the playground have disappeared, —the sea-saw and the giant-stride. It must be twenty years since

the former was in use. Even in early days it was too 'young' to be properly used by most, and, as the average boy grew older, it became an engine for wilder larks. A boy sat at each end, several boys spun it round on its axis, as sailors on a sailer weigh-anchor, but more rapidly, and gradually increased their speed until the boy who could nip hold least firmly flew off at a tangent. Or a boy sat at each end, and each by bumping tested the other's power of holding on. Sometimes the other came to grief; more seldom the bumper placed his foot between the tree and mother earth. When the supports rotted, the authorities rejoiced.

The giant-stride lasted longer. Can you remember, when you were a little chap, sitting on the cross-bar of one of the ropes, while half-a-dozen big fellows, spinning round with giant sweeps of legs and back, floated you into mid-air, ever higher as their circles quickened? And when a rope wore out, a yard of stringy tow (but at one time there were wire ropes) attached to the overalls became a tail for those whose nicknames suggested one.

The flagstaff, by which you may see Mr. Davis standing in the picture, did not exist in 1862. If you were at school when we took it in turns to dig at the deep hole to receive it, you will remember that when we had got it up and had fitted the hole, we discovered that the weather-cock had been forgotten, and that Sidney Aspland swarmed the pole and put it on. The flag cannot be put up so often as is wished, because in playtimes the rope *will* get tied taut by nobody in dry weather, so that when it gets wet it snaps. However, others besides the school household look daily at the weather-cock.

The play-room is more than twice as big as it used to be. It used to be 34 feet long; now it is 70. The wooden end has been removed, and the new part reaches to the High Street door on ground formerly covered by a rhubarb-bed and rubbish-heap. The floor used to be of bricks, but is now asphalt. The rafters, with the boys names cut into them, some more than 30 years ago, and yours among them I hope, are still there. When Old Boys revisit the scenes of their school life here, one of the things they are

almost sure to do is to look for their own and their schoolfellows' names on the rafters. What interesting, delightful little visits these visits are, to the visited as well as the visitor; and with what interest and some excitement the present boys view the visitor, as they whisper to one another: "I say! he's an old boy; *he* was here once." "Was he? How d' you know that?" "Rudie says so, I heard him tell A just now." "Was he? What fun! He looks a jolly chap; I wonder what sort of a fellow he was? Don't you wish he'd ask for a holiday?" "Don't I just! but it ud be no good, we shouldn't get it." "No, I don't suppose we should; but he looks a jolly chap." A few months ago an Old Boy, who had been out of Europe three decades, came home to be married, and the day after the wedding he brought his wife to see his old school. The ropes and poles are there too. For a long time the climbing a rope and pole after breakfast was discontinued, but for some years now the custom has been reintroduced.

I wonder whether you were at school when a certain graduate of the University of Cambridge was master here. He wore lavender or light-yellow kid gloves when on duty in the play-ground, and was of extremely timid disposition, so we had no mercy. It must be more than 20 years ago. We were not allowed to have little lead pistols to fire pink-paper caps, but we had them, and fired them round the master. Waving his arms about like distracted sails of windmills, he literally shrieked from terror, and our delight was intense. The volley was repeated, and again repeated, until the luckless teacher, at his wits end and almost beside himself from fright, took refuge in the solitude of the play-room, shutting the door after him. Then we fetched stilts, and with them barricaded the door. Dead silence ensued, broken finally by plaintive requests from within that the door might be opened. Towards the end of the play-time—I think it was the eleven o'clock—the door was opened, and the member of the University of Cambridge approached, pale, distraught, and very grave. With stately gesture he seized the offending stilts, and with them marched solemnly down the flags to the house. Arrived

there he sedately deposited them amid scarcely smothered fits of laughter (for Mr. Davis might come!)—where?—in Hannah's pantry among the glass and china! Do you remember the expression of Hannah's face when she found them and removed them to the yard?

The games played in the play-ground have changed. Twenty-five years ago I do not remember that we ever played cricket there. The silver birches, see-saw, and giant-stride were in the way. But now from the first day that is warm enough to the first day that is too cold, nothing but cricket is played. There are two pitches, one at the open end for the better players, and one among the trees for the others. The walls surrounding the open end are topped by about 6 feet of wire netting to prevent the balls from going over, except the low wall on the left as we enter the play-ground, which bounds Mr. Bradshaw's garden. That good neighbour, for whom the boys of all the generations since 1862 have had a kindly feeling, preferred our balls to our wire, but no boy has ever had any difficulty in recovering lost balls; the garden door was always readily opened, and when he had good health, there was often kindly aid in seeking from the owner. Hop-chivy is very rarely seen now, but Prisoners'-base, played differently from our old game, Bandy, now called Hockey, Fox-and-Dowdy, Tom Tiddler's ground, and Stag, still have irregular seasons in colder weather. In the old days there used to be annual seasons for marbles and whip- or peg-tops, but it is ages since there was a rage for any one of them. Rounders still has occasional short seasons, and on very cold mornings there is sometimes leap-frog round the play-ground; I have known a teacher tuck in his beard and call the fellows to vault him, then he in turn vaulted them in line. At the field, cricket and football, sometimes hockey.

The old boat of 1862 is still afloat, and occasionally used, though it is no longer outrigged. If I remember rightly, it was originally kept in the stables during the winter, and carted up to Halton water for the summer, where it was tied to a stake and

roof cover. Those were the good old
I am inclined to think a boat so kept
. Afterwards a boat-house was built
Gaunt R.C., but the boat was seldom
it was moved to the Canal Boat-house
ins. At first there seemed something
he side or ridge of a hill and looking
rossing the river by the Aqueduct; but
o it, and on the canal we have the
enjoy the luxury of being towed – the
hen the boat has passed through the
has reached that of high-wooded banks.
t had been moved from the river to the
o pay the small rent for the ground on
n case it should be found well to use it
he thought it might be advisable to
s going on before paying the rent.
his property, he found neither brick
he handed the agents the key instead
of the rent. Some people near had been building.

Bathing in the river has long come to an end. The two places where we used to bathe are now little better than cesspools; at any rate only a mud bath could be had there. But there are swimming baths instead, with the advantage that they can be used all the year round; occasionally, also, we have been to the sea-water swimming baths at Morecambe.

Indians! Do you remember Indians? Was there ever so grand a game when all played with a will! How reckless the hardy were, how daring the brave! And as, far from all friends, we lay hid in a nook amid bracken and gorse, not knowing whether the enemy were far or near, did not the frequent recurrence of a peculiar creepy sensation, half fear, half expectation, cure some of the habit of taking refuge under the bed-clothes when they heard an inexplicable noise in the night when home for the holidays?

How, lying flat, we wriggled along, pulled by fingers and pushed by toes, tracking the enemy like primeval savages; now peeping over the ridge, reconnoitering the hollow beyond; now crushing between gorse bushes, regardless of thorns in stockings and hands; now stopping to listen, and starting a lizard or rat! How, having found an enemy we were chased over hill and down dale; how we came down the quarries in chamois bounds; how we ran down piles of debris at an angle of 60°; how we jumped lumps of rock, piles of gorse, or moderate hollows! What a pace we came down the lane that led to the den, and how we panted when we got there! But, alas! Indians on the Moor is a thing of the past, for the Moor is no more; the Moor is a Park. Yet what is our loss is a public gain; for every one who went on to the Moor in those days, a hundred go up now to enjoy a Park unique in the use that is made of natural rock and unique in its kind, I believe, for beauty and expanse of view; a Park, a gift to the town, due to the enlightened munificence of two generations of Williamsons, makers of Lancaster. An Old Boy, by-the-bye, made the gates. The Flat Moor is there still, but part is a Lunatic Asylum.

The mention of gorse on the Moor calls to mind the bonfires and fireworks in the play-ground, never on the 5th, generally on the 8th of November. They have long come to an end. The neighbours objected to them as dangerous, and I do not wonder. But as the middle of September came round, what a buying of axes and leathern gauntlets there was, and how the grindstone went round! I do not suppose it has been used in all the years since the bonfires stopped so much as it was used in one week at that time. And when the cutting began, every long play-time and half-holiday was spent in Ridge Lane, in the fields behind Waterhouse's Farm, or in the lanes behind Scotforth; and when it was a year for the Scotforth lanes, didn't we just get (I mean buy, not steal) some apples,—just a few,—at the farmers' round about, so that some of us could eat no tea! How the big boys and masters hacked, while the little boys collected and piled! What sledges we made of the

big pieces, and what adventures we had in getting them home! How exciting it was to tear down the streets with Wright's cart piled mountain-high, ten boys at the ropes, two behind at the shafts and a little one at the top; how we cheered in the dark and brought the natives to their doors; and when at last we got to the yard, what work we had to get the cart up to the play-ground! And when the day came, what a blaze we had! especially when the Storeys were here, and Mr., now Sir Thomas Storey, gave us half-a-dozen empty oil barrels. A gross and a half of squibs, as many of crackers, or more; roman candles, rockets and fires; all cracking and banging, and hissing and blazing; and in the midst of it all, the cause of it all, twenty-five boys with coats inside out; some lit up by the fire, some hidden in smoke, all joking with crackers or daring a friend to let a big squib explode in his hand. What a scene! An imp scene from a pantomime, or pandemonium empty.

The event looked forward to after the bonfire (though the fire was sometimes kept in so long that that "after" might be almost questioned) was the Breaking-up Party. That also has been discontinued for many years; the Cambridge Local interfered, and in its place came a Breaking-up tea, such as used to be given only at the end of the summer half. Such teas come now at the end of each term, and are still known as Bust-up Teas. Ticklish Times, Box and Cox, The Bengal Tiger, Old Poz, The Rivals, &c., are seen no more. The Greek dresses for the Andria were never used again; the rôles filled for parts of Midsummer Night's Dream or The Tempest, for Wilhelm Tell or Le Bourgois Gentilhomme, were filled for "this occasion only."

The celebration of May-day came to an end long before Bonfire or Breaking-up Party. On the first of May we used to go to Halton for the afternoon, and played in the field where the ancient encampment is. Two boys picked up sides; one side held the fort, and it was the business of the other side to storm it, take it, and eject the holders. There was much wrestling and tumbling over and rolling down the steep sides. Afterwards we had tea at

the village inn, at which we had new bread and butter, eagerly looked forward to. Times have changed; I do not suppose there is a boy who would trouble himself about new bread and butter now, and an excursion to Halton would be no excursion, for a walk to Halton is not enough for an afternoon. Distances are less to the boys of to-day. A year or two ago more than half the school walked to Preston for a holiday. Yet I remember when the school was moved for some weeks to the then Northern Western Hotel at Morecambe because illness broke out and there was not, as now, a separate house for an hospital, one day we took our tea to the battery ground, and thought it a sort of excursion. Now that would be thought something like carrying the tea-things up to the play-ground. That was before Morecambe became Bradford-on-the-sea, or cotton-and-wool-manufacturing-towns-in-general-on-the-sea.

When we went out all together, we used to have to walk two-and-two while we were in the town. That custom came to an end some time ago. It would have come to an end earlier, but when it was first tried, one young monkey, I think he is a doctor now, took to ringing bells on his way. Now not only is there 'no order,' but the boys frequently go out alone or in twos and threes for the afternoon or long play time. Once,—it was a Sunday afternoon I think, and on the Cockerham road,—a 'little vulgar boy' had the astounding audacity to pull faces at a boy from Liverpool, for which offended Dignity laid Impudence in the dust. Town and gown. You will no doubt remember the stock Sunday afternoon walk along the Canal; the new arrangement leaves boys free to choose another walk.

The museum of miscellaneous specimens found on walks or in holidays is still in existence, but is not much used. Every term a monitor is appointed, graced by the title of Curator of the Museum, but his office is, unfortunately, practically a sinecure. Occasionally there has been a little flicker of enthusiasm, but it has waned on the rejection of intended additions to the existing collection of sheeps', rabbits', and dogs' skulls! The other day I opened the cabinet to find some of the oldest cards; among them I found:—

Carnelian from Lough Neagh	Presented by	W. Hancock, November, 1858.
Hœmatite Oxide of Iron	„	Joseph C. Haslam, November, 1858.
from the Giant's Causeway	„	William Haslam, November, 1858.
Tridacna hippopus	„	H. W. Hawkes, November, 1858.
Fluor Spar.....	„	A. Lamport, August, 1858.
Chinese Placard from Canton...	„	Norman Moore, November, 1858.
Bog Butter from County Antrim	„	John Patrick, November, 1858.

"The Monthly Medley" has become "The Northern Dawn." There is a reading three or four times a year, and there are few numbers without at any rate one excellent paper. Mr. Hoskin was the original editor of the monthly magazine. Of few teachers can it have been the happy lot to win so entirely the devotion of their pupils. We respected and admired him with enthusiasm; in after years we thought of him with warm affection; we heard of the tragedy of his life and death with great grief; we think of him with gratitude and affection still. The "Monthly Medley" used to be bound in a cover designed in pen and ink each month by one of the elder boys; but "The Northern Dawn" is kept unbound.

The order of the day is very much what it used to be. The bell rings at half-past six, and work begins at seven. Formerly there used to be only preparation before breakfast, now there is always one class, and sometimes two or three are going on at the same time. At 7.45 the quarter-bell rings, and till 8.0 there is free time. Some of the yeomanry still assemble in the square at this time for a week about June, and are watched as eagerly and criticised as causticly as they were in your day. At 8.0 prayers, followed by breakfast,—no hot or cold milk and dry bread as twenty-five years ago, but coffee, bread and butter, porridge, and meat or fish or egg, if you please. At 8.20 out to play; 8.45 Bible reading; 9.0 to 11.0 lessons; then a quarter of an hour's recess, followed by lessons till 12; but on Wednesdays and Saturdays lessons go on till 1.0. At 12.0, on Mondays and Thursdays, drilling; then baths. Dinner at 1.30, followed by play till 2.45, then lessons till 4.0, and after a break of a quarter of an hour, lessons again till 5.45. After tea at 6.15, preparation lasting if needed till 8.30, but playground or dining-room for those who have

finished before. At 8.30, biscuits; and the juniors go to bed; the seniors follow at 9.0, and students half an hour later. Possibly students are an institution since your day. A few terms ago there were eight; now there are two. All boys over 16, not necessarily forward in studies, are called students; out of class they do what they like and go where they like (there are limits), and need not be with the other boys; they stay up till 9.30 as mentioned above, and instead of 'biscuits' they have supper. By some the last has been the most coveted privilege. Although the study-plan changes very much from term to term, some of the lessons are still and always have been at the times at which they were held in the sixties. For instance, carpentry comes still on Monday and Thursday morning. (What by-the-bye is the difference between what we have been doing for three decades and the new system called Sloyd, which many have lately first heard of?) Class-singing for those whose voices are not breaking, is still the last lesson on Mondays and Thursdays, and drawing is still the lesson beginning at 9.0 on Tuesdays and Fridays. In the old days we used to go to the School of Art to draw among the casts, generally from the flat, but for some years Mr. Gilbert, who, you will be sorry to hear was seriously ill last year, but has happily recovered, has come to the school. While we went to the School of Art, some of us used to try to wriggle to windows to see the militia go by to the field when up for their annual training; and when they went through the square, sometimes the school-room shutter had to be raised to put an end to too severe a strain upon someone's power of concentration. Now they have a field by the new barracks, and do not come through the square; but all the year round some still go through on their way to and from church. I do not remember hearing the band play "Slap Bang," or "Champagne Charlie," or "Pretty Jemima, don't say 'No,'" on the way to or from church in recent years; "Robert le Diable," and "Fra Diavoli," have taken their places; and sometimes we have, what should be always heard, a good, rousing, unsuggestive march. (Sunday, 7th October, they played the song mentioned in the last paragraph of this paper.

Possibly, by way of warning, the second line was appropriate to the occasion.) Just now we could not have drawing lessons at the School of Art if it were impossible to have them at the school, for the School of Art has been pulled down, and in its place is rising an Art Gallery and Schools of Science and Art, Sir Thomas Storey's Jubilee gift to the town; another instance of beneficent sharing of wealth with his neighbours on the part of a maker of Lancaster. On the wall is an inscription:—

IN HONOREM
VICTORIAE
REGINAE NOSTRAE
ANNIS L REGNI
FELICITER ACTIS
THO: STOREY EQUES
D D D
A.D. MDCCCLXXXVII.

Many have stood and looked, and looked and gone away no wiser. One day I stood and looked, and heard a gazer say to his friend: "Eh, mon! t' Vicer ain't nobbut D.D., and Thomas is D.D.D., look yer theer now!"

Originally there was only one half holiday a week, and we went occasional whole or half-day excursions into the neighbourhood on extra holidays, to Arnside, Bolton Abbey, Malham, Furness Abbey, Clapham, or Grange; but for a long time now there have been two half holidays, which are needed, for pressure of work is greater; and the extra holidays have become very few and far between. It was after this change was made that three terms were substituted for the two half years. Under this system the Easter vacation reaches into May, so the three days at the Lakes come in mid-June, a month later than formerly. There is, I understand, to be a separate paper on the Lakes, so I will only say here that with the date of the visit, its character has changed.

We used to walk as much as we could, and count up our miles when we got back, while, for a week or two before, we went long walks for training. Of late years the boys, with some exceptions, have walked as little as they could, and have been happiest spending the middle day in the grounds of the hotel, playing lawn-

tennis or fishing and catching little. (These last two sentences,—for I write just now at the school-room desk, with the boys all around me,—I read out to the boys and asked whether they were true; the answer was "yes," in a chorus.) Brown this year (he is still known as 'Bruin') offered 5s. for every fish they caught that wasn't a 'crupple.' He still tells us it is 'chatter-watter' time if the tea-bell rings while we are talking with him, and the clock in his place, libelling him to all who don't know him, is still at the dinner-hour.

Until a year or two ago, when Old Boys came to see their school again, there was no one so sure to recognise them, however great the change of time, as Hannah Matthews. A few months ago an Old Boy reminded me of the way she kept us in order in the things that were her province; but Hannah was very much to many boys of many generations;—*most* to new boys who were home-sick, or to hurt boys or invalids. Wonderfully gentle, always thoughtful, her timely visits to the sick-room have been looked forward to by many a boy; and few who have known them will soon forget the snowy nappery, and dainty arrangement of the appetising little meals she brought to convalescents.

Although it does not properly come under the title, this talk ought to have some mention of several masters, for we boys were never slow in attaching ourselves to teachers who understood us; but I hope many of them will see the book, so I do not like to write what might recall forgotten scenes to some reader who would like to remember them. But we were also, as boys are still, very ready to notice peculiarities. Of the three following masters, the first will not see this book; the second will not know it was he; and the third, if he sees the book, will laugh. I wish he would let us know where he is and how life has gone with him. Do you remember the master to whom we used to give five or six plates at breakfast, most of which he used at once in a semi-circle before him? or the master who apologised for his slowness in getting his "slippers" on to his hands for a dance at a breaking-up party? The third, a Scotchman, taught us Latin and other things; if

he came into class with his coat unbuttoned, we felt pretty safe; if the coat was buttoned, we dreaded the issue; but if that day he had had his beard cut, we knew it was all up with us, and that we were 'safe to be turned.'

* * *

Lastly, I come to the boys,—the life of the school and its crown, The change in the boys is less easy to define and more difficult to speak about, but not less great than that in the school buildings and surroundings, and in the externals of school life of which I have spoken so far.

The boys are older than they used to be 20 or 25 years ago. In the old days there were few boys over 14, and a boy of 16 was very rare; but now very often, perhaps generally, there are more over 14 than under, and sometimes twice as many.

The advance in education, more widely spread and penetrating deeper, especially since the Education Acts were passed, and the increased difficulty of examinations; the greater competition in the professions and business, making the struggle to get near the top of tree more severe, and creating a struggle to reach the lower branches, formerly within the easy reach of most; the greater anxiety of parents consequent upon the actual present effect of this competition upon their own lives, and caused by fear of its possible future effect upon the lives of their sons; these and other causes more technically part of the schoolmaster's 'shop,' have combined to give more work to the boys of to-day than their predecessors had. And they do it; some of them slowly, for there are slow boys still,—they used to be called 'stupid,' but now, if a boy seems what used to be called 'stupid,' the teacher thinks it is he who is stupid, impatient, or careless; some of them not very successfully; but all of them grandly,—grandly because all do their best. Can you sympathise with the joy of the teacher who sees all the school doing, as the saying is, their 'level best?'

Do not fear that the knowledge of the greater struggle in life and the consequent greater demands made upon them at school as preparation for demands greater still to be made when they leave

school to go out into the life of the world, weighs as a heavy weight on the minds of the boys, crushing out the joy and brightness, blighting the pranks and jokes, deadening the vigour and enthusiasm, making flabby the muscle, and creating distaste for the athletics we knew in our day. Not a bit of it. Many of the boys, and some of them quite young, come to the school with this knowledge already given them at home; they learn more here, and the others fall in with the stream. Of course they do not realise it all,—that cannot be; but they realise so much of it as fits their years, and this knowledge, by making their school life more consciously a preparation for what every boy looks forward to, makes their work more important. It does not crush and blight and deaden and all the rest of it, but it gives an earnest purpose and a great purpose to life. Why should a boy alone find such a purpose a kill-joy.

In saying what I have done about the boys doing their best, I am anxious not to appear wishful of giving an impression of ideal perfection. I do not know what a perfect boy would be and feel; I suppose he would be happy even in a world of non-perfect men, for he would not be perfect if he were not; but it would be dreadful for a teacher to have to teach perfect boys,—a great part of his work, the greatest in import, if not in bulk, would be gone; besides, how could he, a non-perfect man, approach his perfect pupils? There have been occasionally in recent, as there were in earlier years, boys with twists and taints, inherited or otherwise, subtle and insidious, and baffling the greatest care if the boy is not taken into voluntary partnership, and if he will not help. It is anxious work, as all work is anxious in proportion as it is worth doing, but when the partners, boy and man, see the trouble cured and tamed, —it may be slowly and with relapses,—the partnership is not dissolved. There are still boys who sometimes do not know what question has just been asked in class, as was often the case with me and perhaps sometimes with you. Now and then, if you sit at the schoolroom desk in the evening when the boys are at preparation, you may see a boy, anxious to get into the playground or dining-

room, stop working, and you know he is saying to himself, though he knows he does not know the lesson: "There! that'll have to do for him; I shan't bother with the wretched stuff any longer." But just as he is beginning to put his books away, unseen by others you catch his eye and, if you know your work, it will not be three seconds before the lad is smiling; then he opens his books and settles himself in his chair. Or if by chance that fail, you take a leisurely stroll round the room, and when you come to his place you stop a minute or two, and with a hand on his shoulder explain, analyse, classify, compare, contrast, &c., again, and so help him to get a mental diagram of what he is trying to learn. The lad will not ask to go before he is sure he knows his lesson.

The boys of to-day, I said, are older than the boys of our day. But their interest in matters quite apart from school work,—matters scientific, literary, social, political, and sometimes religious, matters which in various degrees interest the 'grown-ups' and are the subjects of their casual conversations,—has increased much more than the average age. I have been not more delighted than amazed at some of the talks boys have begun with me on our walks and at other times; with their sometimes profound, often clear and common-sense insight, and with the searching questions and fatal objections of an eager disputant or inquirer.

It is natural that this should be so. Man's life to-day has more interests,—though to some they are mere distractions,—than the life of a quarter of a century ago; knowledge is greater and life is fuller, because more democratic; and the boys,—the men of the future,—are not left behind; they do not start with all that their fathers have, but with more than their fathers started with. This greater maturity,—if the term may be applied to what, though essentially sound, must necessarily be immature,—this wider comprehension of the multiform interests of life in the world, added to an equally important greater apprehension of the intricate social relations of life in the home, is due, more than anything else, I think, to the gradual decay of a practice which has irrevocably crushed down much of the clearest, most vigorous thought of boy

life. When a boy made some inquiry at a time when the parent did not 'care to be bothered' with his inquisitiveness, he was selfishly told that little boys (even of 13 or 14) should not ask questions. If the parent was asked something he was ignorant of, instead of saying that he did not know, instead of thinking aloud and drifting to the best answer obtainable and showing what data necessary to a definite conclusion were wanting, his deceitful answer would be that little boys should be seen and not heard. If friends were present and some subject under discussion caught the boy's attention, and with eager interest his eyes moved from speaker to speaker with silent instinctive response to this and rejection of that, and if he asked about something that had been mentioned, the enquiry often met with an amused laugh of superiority instead of the quiet matter-of-fact answer it called for. Too often, also, if the parents wished to discuss any matter, which the boy might just as well know about, as though to erect the greatest possible barriers, he would be told point-blank to 'run away for a few minutes,' or some excuse would be found to get him out of the way,—an excuse which the boy would soon see through and resent. Especially have parents shrunk from making their ordinary social arrangements, criticisms, or complaints in the presence of their sons, so that it has sometimes seemed, at meals for instance, that the parent's life was a farce while the children were present, and really began when they had left. It was as though parents resented in the boys, and therefore snubbed any beginning of interest in things that interested them, instead of recognising in it the germ of the social man to be cherished, developed, and trained with the greatest possible care. They had not yet found out the importance of answering to the best of their ability any question a boy might ask them; for once the interest is really kindled, it must and will be satisfied, and if the parents will not answer, the boy will go to some one else whose answer may not be wise. It used to be as though the parents were trying to subdivide the home life into distinct sections almost without intercommunication, instead of striving to build up a home with all

the members at one with another, each the complement of the rest, all sympathising with all, and together forming a complete, symmetrical, close-knit whole. Boys soon find out this; they are tabooed; part of their nature is starved; they must seek interest elsewhere, perhaps imperfect, perhaps dangerous; the union of the home is shaken.

All this still exists, but I believe there is very much less of it than there used to be, and I think the fact that there is less of it, is the most important factor in producing the change of which I have spoken. Many parents have found out, and others are finding out, that it is the boy who is kept at a distance, not the boy who is admitted to the real family life, who brings trouble, who says and does awkward things and brings about unpleasant, if sometimes amusing *contretemps*. The former does not know when to be silent, the latter does. Of course there are boys, as there are men, whom you can turn round your finger; but see the boy, who shares the interests of the real life of his parents, who knows something of their hopes and cares, watch over his younger sisters at a children's dance, if his mother has told him she does not want the girls to dance with a certain boy; see him perfectly polite, but distant, to the man of whom he knows his father has reason to have a bad opinion; watch him quietly baffle the insidious attacks of impertinent or malicious inquisitiveness, and no one can doubt the careful loyalty of the boy to the family life and interests. The boy is necessarily part of the life of the home in one way or the other, and he has been found a valuable coadjutor in its work when not kept at a distance, instead of the thorn in the flesh he used too often to be considered.

Do you think then the boys of to-day must be insufferable prigs, and are you inclined to prefer a harum-scarum genus more thoughtless till later years? Come and see them in the playground or at football; come and hear them chaff one another; you will find the genuine spirit and hear the true ring of vigorous boyhood. There is nothing like the hideous precocity of the boy you may have heard of somewhere in the north, who when a friend or even a

stranger calls, and he is alone with the visitor for a minute or two before his father comes down, proceeds to pick the visitor's brain with the placidity of a judge,—to cross-examine the visitor on things in general with a *sangfroid* denied the bashful witness, who is calmly remonstrated with should he confess ignorance on any point the boy has heard something about,—for instance, where the day begins,—and whose natural humility, were not the situation so strikingly ludicrous, would be strained to recoiling point, when the boy sings the praises of his father's ineffable wisdom in a tone of voice meant to crush; nor is there anything approaching the priggishness of the girl who at a dance calmly asked her first partner what he thought of the spirit of the age. But the boy who has learnt quietly and naturally at home the lesson of compromise in social life, avoids the danger and sorrow of having it forced into him when he goes out into the world, and he starts with invaluable capital.

The change in the books read out of school illustrates this general change. Books read now are many of them more thoughtful than those read 25 years ago. Those of the 'Verdant Green,' 'Handy Andy,' 'Peter Simple,' types still occasionally appear, but the Mayne-Reid-Cooper school has almost vanished. There are occasional runs on Walter Scott, and, after the books especially for boys by Ballantyne, Henty, Fenn, and Farrer, the greatest constant demand is for Charles Reade and Dickens. But the new element is such books as 'Donovan,' 'We Two,' 'John Inglesant,' 'In Troubled Times,' 'In the Golden Days,' 'Dr. Claudius,' 'An American Politician,' and stories by Howell and James. One boy asked to borrow, but tackled in vain, one of my George Meredith's. I did not wonder, for I gave him the stiffest. For a long time on Sunday evenings boys who liked—all except two or three—have come across to my den for an hour to hear 'The Newcomes' read aloud.

The lives of most of us, I suppose, are enriched by some memory of school-boy friendships. To a few men it is allotted to carry on into after life a great friendship formed at school and

closer knit with passing years. We have seldom been for any long interval without a pair of friends whose friendship, suggesting such a life-long comradeship, is an acknowledged factor in the school life, a perpetual delight to the 'grown-ups' and a beautiful influence upon the boys, though they be unconscious of it, and gently chaff the inseparables. We have memories of our Theseus and Pirithous, Achilles and Patroclus, Orestes and Pylades, Damon and Phintias, Laelius and Scipio, and six of them have been here within the last five years.

Is there any friendship or love more absorbing, unselfish, devoted, pure and beautiful than that which sometimes exists between two school-boys? In the morning when they get up, they wait for one another that they may come down stairs together, and when they go to bed at night, they linger after the others at their bedroom doors for a parting word and a last "Good-night." And with what a look of deep, beautiful love has this spoken or silent "Good-night" been said,—a look which was a benediction from each upon the other and from both, though not thought of by them, upon him who saw it. If the two friends are in the same classes, they prepare their lessons together. If one is quicker than the other, he helps the slower learner, and, when they come to class, cannot, try as he will, repress all expression of anxiety if the other is still shakey, or withhold a look imploring mercy, which says as plainly as spoken words, but quite unnecessarily, "Don't be hard on him, sir; he really has done his best." Then in a tone which apologises for his knowledge, he answers rightly himself. One seldom goes to town without the other; they walk together to Chapel and the cricket-field; when there is a walk or excursion on a half-holiday or long play-time, they are always together; they spend a great part of their holidays together, each at the other's home in turn. If one is not quite so bright as the other and gets into a wrangle with other boys, and the discussion is perhaps growing hot, how anxiously the other watches from the background and awaits the course of events. Shall he join in and help, or will his taking part only make matters worse for his friend by raising a

laugh at his need of help from his chum? Oh, that the other were not quite so stupid! When at the schoolroom desk in the evening superintending preparation, I have several times seen one of such a pair of friends stop in his work, puzzled, and tired, and savage. Looking about to rest for a moment, his eye falls upon his friend at the other end of the room steadily working. He watches him ong and fixedly. Motionless he observes every movement, smiles at a mannerism, admires the rapidity with which he turns over his dictionary, until, unseen, as he thinks, and quite absorbed, at last a beautiful look of pride and love and joy breaks as the dawn, and, growing, brightens as a rising summer sun, and with a deep breath he goes on with his work, refreshed, and content, and happy.

* * *

A few years ago we were at Ullswater. It was early June, and the evening of the second day. Some had been up Helvelyn. Some, dreading the blazing heat, had skirted the lake to Aira Force, and after scrambling about the banks of the upper stream, had continued the walk to Pooley Bridge, there to imbibe plenteous shandy-gaff and ginger-beer before returning by steamer. Others had contented themselves with fishing from the pier or playing lawn-tennis in the grounds of the hotel. The younger boys had gone to bed, or at any rate upstairs, and I had taken six or seven of the older boys on to the lake with their rods. They had been successful, and we were on our way home.

The sun had long disappeared, but the line of hills on the west stood outlined bold and black against the clear pale light that lingers long on a summer night. The waters of the lake, faintly lit where we were by the tender light of a crescent moon, did not reach the shore, but were lost in mysterious gloom towards Patterdale. The only sign that man was on the earth was the light that shone through the trees from the windows of the Hotel, and promised friendly welcome. In different ways we all felt the influence of the scene. A little while before we had been a lively party, cheering the arrival of a big perch, laughing at a hat knocked overboard, and chaffing vigorously. But now one by one

the voices ceased. Each was occupied with his own thoughts, and all were silent. I was thinking, I remember well, what a splendid set of lads they were, and wondering, surprised at the unwonted, welcome silence, what their thoughts and feelings were.

The stillness was broken only by the slow, monotonous plash of the oars as we lazily crept on our way, or by the play of the ripple against the planks when we drew in the oars and let the boat drift. Almost motionless the boat lay upon the waters, and motionless her crew—motionless and silent. There was something weird in the wide expanse of chill, steely waters, gently heaving in the deepening gloom; there was something awful in the blackness of the mountains, and there was majesty in the silence fallen on a resting world.

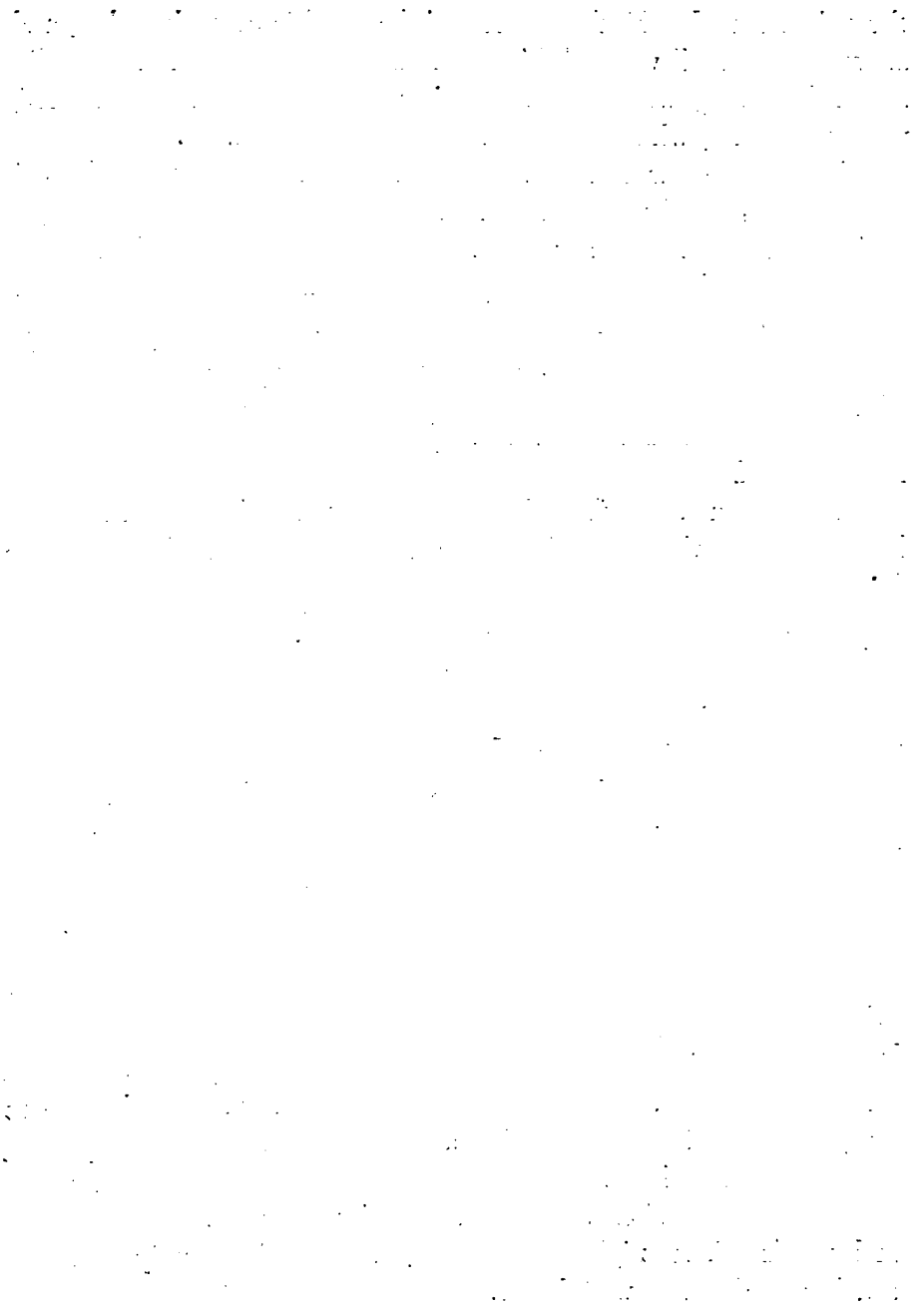
It was a time for silence,—or for music, the music of knowledge of things divine,—for the inspired meditation, the dreamy cadence, the rapturous melody of an empassioned muse.

And the silence was broken. Suddenly the stillness ceased and music came. A voice in our midst, a deep bass so powerful as to be very startling to those near, sent forth through the evening stillness a stanza of the song—

"I'm the Ghost of John James Christopher Benjamin Binns,"

and then there was silence again. The voice was not musical; it was peculiarly and characteristically the contrary; and it was more surprising than the song itself to hear the owner of the voice,—as grand a lad as anyone could wish to know, but the last person expected to sing except when drowned in a chorus,—volunteer so pronounced a solo. Yet silence followed the song, for there was an abandon in its delivery, the enthusiasm of one compelled to express something of the unwonted wonderful emotion which had come to him, a thrill in the rugged voice, a momentary falter in one phrase, that told a heart had been touched. Nature had spoken to a man.

We were all silent. But after a minute or two came laughter and words. The night had fallen, we could scarcely see one another, and we rowed home.



CONTRIBUTIONS

BY

PUPILS.

AN HOUR IN THE THORVALDSEN MUSEUM.

By C. H. HERFORD, M.A.,

Of Trinity College, Cambridge; late Berkeley Fellow of the Owens College, Manchester; Professor of English Language and Literature in the University College of Wales.

Αἱ Χάριτες τέμενός τι λαβεῖν ὅπερ οὐχὶ πεσεῖται
Ζητοῦσαι ψυχὴν εὗρον Ἀριστοφάνους.

—Plato.

"Seeking a deathless Temple among men,
The Graces found—the Soul of Thorvaldsen."

Among those European cities which in some moment of unguarded ambition have claimed the title of the modern Athens, and which the perennial irony of strangers has mercilessly kept in mind of the claim, Copenhagen holds a conspicuous place. Nature, which has otherwise dealt with it in no stepmotherly spirit, had clearly a different design in the physical conformation of its site; and the resemblance which nature failed to create has hardly been made good by art. It has neither the rock-bound Acropolis of Edinburgh, nor the Attic veil which Louis of Bavaria flung over the monotonous physiognomy of Munich. Nor has it exactly that serene consciousness of being classic ground, that atmosphere saturated with literary traditions and enthusiasms, in which little Saxon Weimar resembles the Athens of convention rather than of history. In outward aspect at least it is still primarily that "haven of merchants" which its first settlers and nomenclators perceived it to be, with its safe and easy approach from the deep and tideless Sound, with its natural harbour, the narrow but deep strait between the islands of Sjœland and Amager, running through the heart of the city and giving access to the open sea towards both east and west; with its massive piles of brick warehouses, its business streets a

trifle less business-like than Cheapside, its residential streets a trifle more æsthetic than Gower Street, not precisely ignoring architecture as a fine art altogether, but essaying their little frigid ventures of rococo moulding and pilaster with an air of bashful insincerity even more chilling to the spectator than the robust Philistinism of Bloomsbury. As it stands indeed, Copenhagen belongs in great part to the least happy age of modern street architecture. The refined and scholarly manner of modern Berlin has not yet crossed the Baltic; and, on the other hand, whatever traces it may once have presented of its neighbourhood to the brickwork marvels still mellowing in Lübeck and Stralsund, have been wholly obliterated, first by two great fires in the last century, and finally by one of the most shameful acts recorded even in the foreign policy of England, the bombardment of 1807.

One spot however there is in Copenhagen which, if Athens could be recalled by the lonely labours of one man, unenforced by any congenial activity of the entire community, would go far to justify a claim the grounds for which are otherwise not apparent. On a sequestered and spacious quay, in the very focus of the city, stands the Thorvaldsen Museum. A few paces off on one side is the busy Amager market, with its babel of tongues, and its crowded stalls of fruit and produce from the rich orchards of Sjœland. On the other, silent, black, and bare as the market is full of stir and sound and colour, tower the ruins of the vast Christianborg—the royal palace burnt two years ago and still unrestored, thanks to the present autocratic fit of the king and the stoppage of supplies, which is the price he pays for indulging it. Life on the one side and Death on the other, and between them the abode of lifeless but imperishable Art. The Museum is however itself outwardly most in keeping with its ruined neighbour. The walls are covered with the remains of faded frescoes, and its whole design is pervaded by an obtrusive and ceremonious gloom which is at once explained when we learn that it is intended to reproduce "the style of the tombs of Etruria." It is in fact the grave of Thorvaldsen as well as his Museum; his body rests in the sunniest spot of the inner

court, sheltered by evergreens, and surrounded on all sides by the gray walls of the gallery and its gleaming monuments, a spot chosen and often visited by himself. No resting-place could be more fit; the great sculptor sleeps in a sanctuary of which his presence is the sufficing consecration, guarded as it were from the outer world by the marble multitude of his own spiritual children. And yet one regrets that, as regards outward style, the idea of a Mausoleum should have so completely prevailed over that of a Museum. It strikes a perceptible discord to associate this prodigious worker, this "Held an Fruchtbarkeit," this life-long indefatigable creator of beauty, with decay; nor has the pervading gravity of Thorvaldsen any suggestion of gloom. His inspiration is that kind of profound joy in loveliness of form and feeling which neither laughs nor weeps, which has nothing to do with either tragedy or comedy as such, and even seems at first sight to ignore the misery of the world and to be loftily oblivious of its follies, but which is yet one of the springs of all immortal energy in art.

The defects of the exterior however are soon forgotten on entering. The vast collection entirely surrounds the inner court, being arranged partly along corridors, partly in suites of small rooms. In the former are placed the great processional Friezes, above all *Alexander's entry into Babylon*, in the latter the small bas-reliefs, the statues in both. There is here no attempt to classify his works chronologically or to represent the successive phases of his development. And such a classification would have had little purpose. Thorvaldsen had, broadly speaking, no development. His genius was devoid in its simple grandeur of the dissonances which development is a continuous effort to reconcile. Of that complexity of intellectual and artistic impulse, "the strife, the mixture in the soul,"* which makes the lives of artists of the second rank so fascinating to the historian and critic, he knew nothing. The shy and indolent young fellow who left Copenhagen with the Academy's medal about the year of the Revolution, to begin his

* Matthew Arnold, Sonnet on *Rachel*.

twenty years' career at Rome, already contained in himself all the qualities and materials of the ripe artist; they only needed the evoking touch of one of those decisive moments which suddenly reveal to genius the possibilities of its own power, and it breaks out with the cry *Anch' io sono pittore!* Such a moment was to be for Thorvaldsen the first sight of the antique sculpture of Rome. As yet however he appeared even to sympathetic observers to be among the least qualified of men to make full use of the splendid privilege he had won. He was very ignorant,—even the history of art had no attractions for him; and he acquiesced in his ignorance with something more than the phlegmatic serenity of the northern temperament. No persuasion could induce him to learn a word of Italian in the course of a voyage which quarantine and other delays prolonged for many weeks, and the good-natured captain who had offered to teach him broke out into honest indignation at this incorrigible idler, and prophesied no good of his future career; while a distinguished countryman who met him at Rome wrote home in serious expostulation to the Academy for sending out its students so disgracefully ill-prepared. Thorvaldsen was one of those to whom the world speaks through one organ only, but with an intensity proportioned to the narrowness of the channel. The first visit to the Vatican struck home with overwhelming effect. For a time he was incapable of work. Of the old serene idleness there was no longer any question, the business of his life lay unmistakably before him; but the swiftness of conception and fearless rapidity of hand with which he had distanced all his artistic rivals at Copenhagen were become equally impossible. It was only for a time, however, and then the profound congeniality of artistic nature which made Thorvaldsen, in spite of wide divergencies in sentiment, the most Greek artist of modern times, steadily with gathering energy and sureness asserted itself. From that moment his career was, on its artistic side, a record of labour without haste or rest, unclouded by any fluctuation of aim or of method, and scarcely matched in the annals of art for evenness and certainty of inspiration.

Thoroughly Greek, for instance, in style, while not altogether so in sentiment, is his magnificent rendering of Vulcan, the great working-god of antiquity,—a conception which Thorvaldsen, of all modern sculptors, was fittest to originate. The Greeks were never able to take their divine artisan quite seriously; Homer handles him with unmistakable jocosity, and by no means intends that the gods should monopolise the good-humoured mirth with which they watch him hobbling along the hall. That picture reflects a state of society in which the artist is still undistinguished from the mass of handicraftsmen upon whom the aristocratic Hellen looked down with so unqualified a disdain. No trace of these mean associations is perceptible in the Vulcan of Thorvaldsen. Like Odysseus, he represents a man of ripe years in the fullness of masculine vigour, the figure in dignified but not indolent repose, the face of a refined and almost spiritual beauty, the eyes austerely enthusiastic, and forehead with a certain intellectual hauteur. He represents not merely the labourer but the passion and the dignity of labour; and the hammer which he wields is not as manipulator of the tools of war or the instrument of bread-winning, but the symbol of the creative energy of man.

This sympathetic delight in creative power, and especially the creative power of art, is continually breaking forth in Thorvaldsen. He loves to represent the musician and the poet, singing Cupids and dancing Nymphs; and no sculptor so nearly succeeds in making us forget the inexorable silence of marble. The *Apollo playing to the Muses and the Graces*, and the *Homer reciting to the people*, are veritable masterpieces of the art of recalling the characteristic effects of one fine art by symbols addressed to another. Every face, every gesture and attitude, carries on and enforces the illusion. The crowd of listeners in the latter are a motley group, of all ages and either sex, with nothing in common but the absorbed interest which holds all alike spellbound to the song of the great rhapsode, and which is painted with the most delicate and versatile sympathy on every face. The eager boys in the foreground, the young warriors pressing on the rear, the mother clasping her child closer to her

breast as she listens bashful and afraid, the gray old man behind her leaning forward over his staff to catch this wondrous echo of the clanging battle-fields of his youth; every one of these absorbed faces contributes its stimulus to the imagination and renders it more instantly responsive to the magnificent energy of the central figure. The old poet's hand crashes over the strings and the rugged music of the Aeolic hexameter breaks from his open lips.

Every one knows the pair of bas-reliefs, "Night" and "Morning," the finest interpretation in modern art, as Byron's stanzas on evening in *Don Juan* are in modern poetry, of the wonderful line of Sappho:

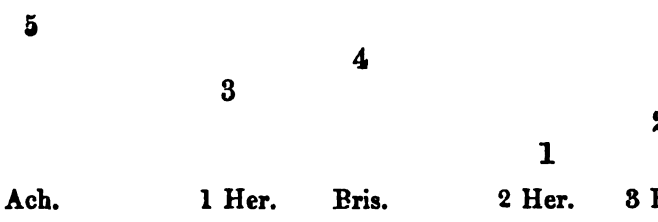
Ἔσπερε πάντα φέρεις ὅσα φαίνολις ἐσκέδασ' Αὐώς.

The pair is one of the simplest and vividest instances of Thorvaldsen's use of *contrast*, a principle which no modern sculptor has employed with so much subtle effect as he. "Morn scatters, Evening gathers in;" and the young Day, who in the one picture comes showering forth light and fresh flowers over the world, is in the other himself peacefully "gathered in" in the spirit of Byron's "Thou bringest the child too to its mother's breast."

The poignant antithesis of "Hector's parting from Andromache," and "Priam begging the body of Hector" is no doubt implicit in the Iliad. But poetry, which can represent a continuous story so well, is really inferior in the power of producing the full effect of contrast, to a plastic art like sculpture, which can tell a story only by choosing its two or three supreme moments and loading each with the suggestion of what intervenes. And most readers even of the Iliad feel that the tragedy of Hector's death comes home to them with more searching pathos in the two marble bas-reliefs of Thorvaldsen. In the one he is parting, gay and in high spirits, from wife and child; he has taken the boy from the nurse, and tosses him in the air, while Andromache—one of Thorvaldsen's finest womanly types, rather Teutonic than Greek,—looks on in subdued delight, forgetting for the moment her forebodings of ill: in the other the old Priam kneels at the feet of Achilles to beg the boon of his dead body; his features wrung by anguish, while the

conqueror gazes at him with compassion only less than his pain.

But it is in the composition of the single groups that Thorvaldsen's mastery of contrast is above all visible. The unity of subject is indeed always absolute: all the figures—they are rarely more than four or five—play their parts in a common action which deeply concerns them all; but the emotion which it raises in them is of widely different kinds and degrees; it forms a kind of scale the notes of which are wrought into a kind of sequence with the finest sense of harmony. The "Abduction of Briseis," for instance, represents the heralds leading away the shadowy prototype of Boccaccio's and Chaucer's *Cressida* from the tent of Achilles. The two lovers have just been parted; and while Briseis, timid and unresisting, looks sadly back, Achilles has turned away to hide the exasperation and anguish which distort his face. The three heralds do their office with the dignified composure of their race; but they are of different ages, and the tragedy in which they are the instruments affects them in different degrees. The beardless youth, standing between Achilles and Briseis, looks compassionately upon her as he gently opposes her return; the second, a mature man, draws her away by the hand with an air of stern reprobation for the follies which he has outgrown; while the third, an old man, looks on with that humane tolerance which is not the least precious of the gifts which age "brings" in compensation "for those it takes away." One hesitates to apply to these matters what Mr Ruskin has called "the low cunning" of figures: still they may serve to represent the structure of such groups more lucidly than many words. For, if we denote the gradations of the emotion which culminates in Achilles by the numbers 1—5, the emotional *melody* of the group in question would take some such form as this:



We are of course as far as possible from regarding this piece of pedantry otherwise than as the crudest of diagramatic expressions for what, strictly speaking, cannot be expressed. Pedantry is the necessary defect of every attempt to apply the methods of the understanding to the products of the imagination, to translate poetry into prose, to make beauty perfectly explicit and intelligible. But we are none of us absolute prosaists; we piece out the defects of prosaic method with our own imaginations; we read our own glimmerings of poetry between the lines of the commentary and behind the symbols of the diagram. Nay, it may even, now and then, be no other than the pedant whose touch awakens the *poète mort* within us. In this spirit let our readers accept these fragmentary attempts to decipher a genius itself singularly without pedantry though by no means without method. Thorvaldsen is one of the abiding exponents of the joy in life and labour and beauty; and if we have kept before them principally the more serious aspect of his art, we must remind them that in escorting them through a Museum we have also been wandering by a tomb, and that under such conditions the phraseology of an obituary may at times creep into the discourse of the most resolute devotee of art for art.

DUKE STREET, LITTLE BRITAIN.

By NORMAN MOORE, M.D., (Cantab.)

Fellow of the Royal College of Physicians; Warden of the College of St. Bartholomew's; Assistant Physician and Lecturer on Pathological Anatomy to St. Bartholomew's Hospital.

One charm of living in the city of London is that every street has a history, so that their very names are sufficient to fill the mind with thoughts as you pass down them. The front door of my house is in the famous Duck Lane, which after being known as Duc Lane, Doke Lane, Duck Lane, and Duke Street for six centuries, has in the last two years had a label "Late Duke Street" fastened on to its walls, and become part of its no less ancient neighbour, Little Britain. At one end of Duke Street is a flagged passage called Montague Court, once the entrance of the town house of the Viscounts of Montague. Duck Lane will perhaps be remembered as long as most great families, for it has been mentioned by the poets many times, a record, as they themselves assure us,

Quod nec Jovis ira, nec ignes,
Nec poterit ferrum, nec edax abolere vetustas.

The notice I like best to remember is that of Swift. It is in the lines on his own death, where he talks in his ironical vein of how soon books and authors are forgotten:—

"Some country squire to Lintot goes,
Inquires for Swift, in verse and prose.
Says Lintot: 'I have heard the name;
He died a year ago?' 'The same.'
He searches all the shop in vain.
'Sir, you may find them in Duck Lane.
I sent them with a load of books
Last Monday to the pastry cook's.
To fancy they could live a year
I find you're but a stranger here.'"

The street was then full of second hand book shops. There is not one in it now, but some of the queer old projecting houses remain, in which, according to Sir Samuel Garth, Dr. Tyson, the great anatomist, collected the books which filled his shelves, unreadable to everybody except himself.

> "Here dregs and sediments of authors reign,
> Refuse of fairs, and gleanings of Duck Lane."

Dryden's famous poem "on the death of His late Highness Oliver, Lord Protector of England, Scotland, and Ireland," was printed close to the end of the lane.

> "In Well Yard, near Little St. Bartholomew's Hospital, 1659."

Says the title page of the first edition. The bookseller kept the copies in his store-room for many years, and brought them out again, with other poems later in the king's reign, when men could read the praises of the Protector as we read those of Augustus, enjoying the verse and without party feelings about the man. I like to think that those splendid lines,

> "His ashes in a peaceful urn shall rest,
> His name, a great example, stands to show
> How strangely high endeavours may be bless'd,
> Where piety and valour jointly go,"

were first carried in print down this narrow street to be corrected by Mr. Dryden, and so passed the site of my front door on their way to everlasting fame.

On March 1st, 1711, another composition, also destined to be famous as long as our language is understood, saw the light near the end of this street in Little Britain itself. Perhaps Mr. Addison walked down Duck Lane the Wednesday evening before, from Mr. Buckley's in Little Britain, where he had corrected his last revise, and surely musing as he walked, for did he not take that line of the Ars Poetica for his motto?

> Non fumum ex fulgore, sed ex fumo dare lucem
> Cogitat.

That old projecting house of Mr. Griffiths, stoppered-bottle maker, probably saw him as much as old beams and plaster and

casements can see. I can see him walking along and cogitating and smiling as the idea crossed his mind of his favourite muse, Clio hovering with a wreath of laurel over his head, like the celebrated angel in his "Blenheim," and next morning out came The Spectator, No. 1, and all London read it and enjoyed it from the motto to the end. The initial of Clio is very prominent in the usual editions, but in the first single sheet, as it left Mr. Buckley's in Little Britain, the essay ends high upon the back of the page, and is followed by advertisements of books; of Dr. Drake's new Human Anatomy; of Sir William Petty's Political Arithmetic; of a work on Civil Government by the Rev. Benjamin Headley, and of some others; and at the bottom of all, rather obscurely situated, is the C. Clio did not resent the position of her initial as we know, and placed the laurel wreath on Mr. Addison's head, to wear fresh and green to the end of time.

Soon after I came from Cambridge to live in this street, a poet from Oxford came to live there too—the first real poet with whom I became acquainted. He was a tall and handsome man, with long black hair. Like Dante, Sir Samuel Garth, Sir Richard Blackmore, and other famous poets, he had taken a degree in medicine, and he resembled Milton and Cowper in that he wrote both English and Latin verse. One evening he came into my rooms and told me that he had seen a priceless work of art—a true, real, genuine Raphael—at a shop in the Grays Inn Road, for the reasonable, but, at that moment to him, unattainable price of seven pounds. A benevolent old gentleman, who lived at the corner of the street—this ever famous Duck Lane—proved a friend indeed as regards the seven pounds, and the poet secured his Raphael. Often and often have I looked at it as it hung on his wall; so did all his friends, and at last it hung there no more. It is never mentioned now, and I feel sure that while any remarks about the Grays Inn Road period of Raphael's painting, or suggestions that some of the models of his madonnas were accustomed to fill their water jars, this one had such a jar,

at the Fons Clericorum, or Clerkenwell, would be thought by the poet's family very malapropos and ridiculous.

One end of Duke Street leads into Smithfield—a fine open space where tilts used to be held, and where they might be held still if they were in fashion. From the end of Duke Street you can just see the spot outside Smithfield, and beyond the city limits, where in very old times a group of elm trees marked the place of execution. Here Sir William Wallace ended his days. I once pointed out the spot to three rough commercial, half educated Scotchmen, who had asked me some questions about Smithfield. They instantly walked to the place, and examined minutely the pork pie shop, which in Queen Victoria's days replaces the elm trees of the time of King Edward I. I felt a regard for the Scotchmen, for though they had none of the "sweetness and light" first mentioned by Dr. Swift, and since so much admired in the University of Oxford, they showed that they had fine feelings, cared for the glory of their country, and had read Burns to some purpose.

I like myself to see even the region of the sky which a great hero last looked at, and I never pass this corner, which a bright red pork pie shop, decorated with a large and gilded pig, cannot vulgarize, without thinking of Wallace. Another day I pointed it out to a lady of the family of a famous chancellor of the exchequer of Queen Elizabeth, who had been visiting the tomb of her kinsman in the neighbouring church of St. Bartholomew the Great. By a curious chance, her son, she told me, was the owner of Wallace's birth-place. At the opposite end of Duke Street, you can turn into Bartholomew Close, once the green and pleasant enclosure of an Augustinian Priory, where the canons walked about in their white gowns and black hoods and cloaks on delicious turf, and now and then picked up the ripe mulberries which fell from the trees, the last of which were cut down in this century. After the canons were gone, and when the Close had much of its present character, Milton lived in it for a while, and no doubt

often stepped out into Duke Street. If you do not go into Bartholomew Close, but go straight on, there are five ways into the outer world from Duke Street. You may go down Little Britain, which is no straight modernized thoroughfare, but a right angle, leading you into Aldersgate Street. If you do this, you pass the Church of St. Botolph, where Dame Joanna Astley, nurse of King Henry VI. is buried. She lived by the Smithfield Gate of St. Bartholomew's Hospital, but founded a chantry in this church, and had a handsome tomb, till her ashes were confused with those of the church and the city in the great fire of London.

"Mors sceptra ligonibus æquat" is a very old sentiment. Grand tombs are an attempt to do away with this levelling tendency of death, but in London city the great fire came and re-established its truth. Dame Joanna Astley rests unknown with all the mediæval inhabitants of the parish of St. Botolph, Aldersgate, and a few yards further off, in Christ Church, the next parish, three queens and many great citizens, and poor citizens, and apprentices, and Franciscan friars are equalised by the same fierce element.

The shops in Little Britain are many of them brilliant, for it is the quarter where the makers of gold and silver lace display their art. They have worked their little looms and cushions in this part of London for three centuries. When I see a colonel in the guards, or a queen's trumpeter, or a lord mayor's footman resplendent in gold lace, I know that the shining plumage was probably woven by girls in Little Britain. The people of Little Britain have the decorating of all the belted knights and marquises and dukes that the Queen makes. When there are no grandees to bedizen they make electric bells. These are the chief occupations of the inhabitants, but one unique man has over his door the words, "Teapot handle maker." The handles cannot be turned on a lathe and have to be sawn out of ivory. This great example of the division of labour scorns to make a top knob or a spout,

but will now and then, in leisure moments, mend a paper knife for me or a fan for my wife. In all London, he tells me, there is but one other teapot handle maker. Proud distinction, select occupation, the only employment that is not overstocked; who would not, if he could, be admitted a T.P.H.M.? Who can tell by what rites such admission is accompanied, what labours must be accomplished before it can be obtained?

There are five ways out of Duke Street through Little Britain. One—Bull and Mouth Street—has just been shut up, and is to be part of some new General Post Office Buildings. It was a street of some antiquity, for it was said to be Bouloign Mouth Street, and to have received its name at the time of the siege of Boulogne Harbour by King Henry VIII., just as we now see in new parts of towns Alma Street, Inkerman Street, which commemorate more modern wars.

Both Bull and Mouth Street, and Angel Street, the next turning, lead into Aldersgate Street. A little way down Angel Street is a turn to the right, now called Roman Bath Street, but once Bagnio Street, from the hot air bath which stood at the corner in the time of Charles II., and was only pulled down when the new Central Telegraph Office was built. The bit of land on which this bagnio stood had a curious history. It was given, as I have been told, by its former owners, soon after the Restoration to Sir Thomas Adams, Lord Mayor of London in 1646, by Charles II., as payment for money lent to the King when in exile. It belonged to some of the descendants of Sir Thomas Adams till bought a few years ago by the crown. Sir Thomas Adams deserves remembrance for his love of learning as well as for his loyalty, for he founded the professorship of Arabic at Cambridge, and paid the expenses of translating the Gospels into Persian, and printing them. A pleasant letter has been preserved in which he congratulates the first professor of Arabic on his appointment, saying:—"And now, with the leave and favour of those worthy cedars, or seraphims rather, of your learned Academy, I wish you much joy in the execution of

that hopeful employment, that you may be deservedly honoured in Cambridge and renowned in England." In a house in Little Britain, where lives a lady descended from Sir Thomas Adams, there are preserved some beautiful old octagonal china plates, decorated with his arms, on a field ermine, three cats, passant azure. There is a statue of the old baronet in Sprowston Church, in Norfolk, which I have not seen. He must have been a very handsome person if he at all resembled his descendant, the owner of these plates.

On the opposite side of Angel Street is the wall of the Bull and Mouth Inn, with its sign, a great grinning mask beneath the figure of a bull. My little boy used to look at it whenever he walked down the street, and may perhaps remember it when he grows up; but in a few months it will decorate Angel Street no more, for the present buildings are all coming down, to be replaced by new additions to the Post Office.

Two ways out of Duke Street remain. You may go straight on across a bit of the angle of Little Britain, and past Christ's Hospital into King Edward Street, and so into Newgate Street; or you may go part of the way and turn to the right at the end of Christ's Hospital, and following a foot passage cross through what were once the transepts of the great Church of the Greyfriars into Newgate Street. The Nave of the Church was never rebuilt after the fire, and is a large flower garden, bordered by a picturesque piece of old red brick architecture, part of Christ's Hospital; the school which replaced the Franciscan Monastery, and which is soon itself to be moved into the country, leaving its ancient site to be covered with warehouses and offices. Sir Christopher Wren built the modern Church, with its curious tower, on the site of the choir of the monks, and the Christ's Hospital boys go to church there. Dr. Morton, one of the most illustrious of English physicians, is the greatest person of those buried in Wren's Church, but the Friars had many grand tombs to show. Here rested the first wife of King Edward I., and here Isabel, queen of David, King of Scotland, who died during his captivity in London, and a Queen of the Isle of Man.

King Edward Street is a modern name, and refers to the founder of Christ's Hospital, King Edward VI. There is a little figure of him over the gate, with the inscription: "Edward the Sixth, of famous memory, King of England, was the founder of Christ's Hospital, and Sir Robert Clayton, Knight and Alderman, sometime Lord Mayor of the City of London, erected this statue of King Edward, and built most part of this fabric. Anno Domini 1682." King Edward VI. was long considered a model for boys.

In the last century King Edward Street was called Butcher Hall Lane, and I have a book printed there when it had that name:

"The Chymical Vade Mecum. By R. Poole, M.D.
London: Printed for E. Duncomb, in Butcherhall Lane. 1748."

The book belonged to old Mr. Dilke, the owner of the *Athenæum* newspaper, and his name is written on the title page. He had many rare books in his library, and used to say of the British Museum that it only contained books which everybody had, and that if you wanted all the books on any particular subject you must collect them for yourself. This remark has some truth in it, especially as regards the books of the last century; and it should be added, for Mr. Dilke's honour, that when he died he improved the British Museum Library by leaving many of his books to it. Butcherhall Lane was earlier still called Chick Lane. When the fine old elm trees and the picturesque brick wall of Christ's Hospital disappear from the right side of King Edward Street, and are replaced by many storied warehouses, as it is said they will in a few years, I shall call them to mind whenever I pass down the street, and think, with regret, "quantum mutatus ab illo."

I hope I have made it clear that had the seven champions of Christendom started from my front door in Duke Street, each might have ridden by a separate way on his splendid charger, with his plumes waving from his helmet and his crest standing in their midst, his sword by his side, his shield on one arm, and his lance erect in the other hand, seeking adventures in the wide world; ready to assail impossibilities, to thread labyrinths, to brave the

burning rays of the sun in the desert, to face wild beasts and spectres, to release captives and overcome oppression, in short to do all that knights and christian champions should do and have done from the days of St. George and St. Denis, to those of Don Quixote de la Mancha and to our own times.

A REPLY TO DR. WARTON'S "TRIUMPH OF ISIS."*

By NORMAN MOORE, M.D.,

Of St. Catharine's College, Cambridge; Fellow of the Royal College of Physicians.

Stay Warton! Granta may with thee contend
For higher honours than the court can send.
"Her bowing deans." Warton, I scorn the phrase;
Fit for an Oxford Dean of former days,
Who gave to Phalaris his weak support,
Food for our critics, quarry for their sport.
When will your scholars next with Bentley fight?

* Dr. Warton in the "Triumph of Isis," a poem written in praise of the University of Oxford, alludes contemptuously to the large share of ecclesiastical preferment which Cambridge obtained in the last century, and unjustly attributes it to the servility of her graduates, of some of whom he speaks as "her bowing deans." This was in the half century which succeeded the famous controversy on the genuineness of the Epistle of Phalaris, when Dr. Bentley, of Trinity College, Cambridge, refuted Mr. Boyle, and with him his tutor, Dr. Atterbury, Dean of Christ Church. They insulted Bentley by jeering remarks in an index. Dr. Atterbury, it will be remembered, afterwards intrigued with the Pretender, and had to fly to France.

Or have they ta'en, like Atterbury, flight,
Safe behind Lewis, indexes to write,
To scoff at learning which they do not own;
False both to classic concord and the throne.
See, Warton, see, our poets with their bays;
Produce as good, and yours shall share the praise.
Say who by Isis pours forth Milton's strain,
Like organ music swelling out amain.
Or who in Dryden's manly numbers sings
With equal force of nature and of kings?
Who can with Cowley sweetly praise a dame,
Or Prior like turn a couplet to his flame?
Or who is master of a fairy lay,
That can, like Spenser's, charm the summer day?
Milton, Dryden, Spenser, Cowley, Prior:
Break, Isis, break thy deep-defeated lyre;
And, Warton, when in railing mood again
Strive not from Granta laurels to attain;
'Tis useless struggle and adventure vain.

RAILWAY SIGNALLING.

By W. BAYLEY MARSHALL,
M.Inst.C.E., M.Inst.M.E., F.R.S.S.

There is perhaps nothing which shews the energy and perseverance of Englishmen more than the vast net-work of Railways which practically covers our Island; and the magnificent service of express trains which perform their work day after day, from year end to year end, with almost unvaried punctuality and immunity from accident.

To the Signal Engineer belongs much of the credit of this efficient working, and the object of the present paper is to describe in a popular manner some of the principal devices adopted to guard against accident.

It is a trite axiom that no two solid bodies can occupy the same space at the same time; and the energies of the Signal Engineer have been directed to frustrate any effort on the part of two Railway Trains to violate this law of nature.

The two most important subjects in connection with Railway Signalling are the Interlocking of the Points and Signals, and the Block System. I propose to confine the present paper to a consideration of these two points.

On reading the account of a Railway Accident some few years ago, one often came across some such sentence as this: "The accident would not have happened had the points and signals been properly interlocked," and we all agreed that such really would have been the case, whether we knew what was involved by the term *interlocked* or not.

The meaning of the term *interlocked* is that the levers actuating the points or switches (by which the trains are moved or shunted from one line to another) are so connected with the levers actuating the signals (which govern or guard the line), that the points cannot be moved until the signals have been put to such positions as shall guard or protect the train during the operation of shunting or crossing.

The manner of effecting this is best explained by first taking the case of a simple junction consisting of a double line main road, with a double line branch, and considering the case of the relation of the signals to the points: and then investigating the method of interlocking the levers; taking for this the example of a small three-lever apparatus, which will shew the *principle* of the system, and avoid the complication of dealing with a large number of levers.

Figure 1 represents the plan of the junction, shewing the points and signals set right for both up and down main lines. The several roads or lines are numbered 1 to 4, and the signals corresponding thereto have similar numbers. It must be remembered that in approaching a signal, the arm on the left hand side of the signal post is the one to which attention must be paid. The branch are distinguished from the main line signals by having the end of the arms indented or cut like a fish tail; or furnished with a round disc at the outer extremity.

Figure 2 shews the same junction, but with the points and signals set right for both branch lines; the paths along which the trains would travel are in each case shaded.

Figure 3 shows the arrangement of points and signals for a main line *down* and a branch *up* train to pass at the same time.

If a train has to pass from the main *down* line to the branch *down* line, all traffic except upon the branch *up* line must be stopped; as a train upon the main *up* line would run into the *down* branch train whilst it was crossing over, in this case the arrangement at Figure 2 would be safe.

These three arrangements show the only safe combinations for two trains passing the junction at the *same* time.

We will now examine what provisions are made so as to prevent the signalman giving the wrong signal, or moving the wrong points.

In Figure 1 suppose the points and signals were to remain as shown after both *up* and *down* main line trains had passed the station: a branch *down* line train now comes up, which has to be shunted on to line No. 3. Signal No. 3 must be lowered to allow the train to pass; the lever working this signal is however interlocked or connected with the lever which alters the points, so that the signalman must first of all move the points over to the position shown on Figure 2, before the signal lever can be altered. He finds however that the lever which works the points is itself interlocked with signal 1 and 2, and both these signals must be put at danger, before he can move the points over; for, as already explained, the *up* main line must be blocked as well as the *down* to make it safe for the train to pass. Accordingly, the signalman first moves signals 1 and 2 to danger; he then finds that the *lock* is removed from the point lever, and he can move it over and thus release the *lock* from the signal No. 3, which he then lowers and allows the *down* branch train to pass.

Similarly, suppose the signals set as in Figure 2, and *both* branch line trains to have passed. A train comes up on the *up* main line No. 2, the signal must be lowered to allow it to pass, but, before doing so, the points must be put back to the position in Figure 1; and in order to do this both branch signals, Nos. 3 and 4, must be put to danger, as they lock the point lever in a similar manner to Nos. 1 and 2 in the former case.

The mechanism by which this interlocking is effected is extremely ingenious, and somewhat complicated; and has been the subject of numerous patents. A detailed description of this mechanism would be too technical for the present purpose; I shall therefore content myself with a typical illustration which

will serve to explain the *principle* of the apparatus.

Figure 4 is a sketch plan of the top plate of a three-lever apparatus. Figures 5, 6, and 7 are sectional views taken at three different levels below the top plate. Figure 8 is the plan of a simple junction to which the levers belong.

The levers are shown in section, and are lettered *a*, *b*, and *c*. *a* and *c* are connected to the signals, and *b* to the points. *a* is the main line and *c* the branch signal.

In Figure 5 the locking arrangement consists of plates of iron—*d*, *e*, *f*, and *g*—pivoted at one end to the front of the frame, and connected together at the back by the bar *h*. The levers are lettered as before, *a*, *b*, and *c*. Figures 6 and 7 show the second and third rows of locks (which are placed close under the first row) similarly pivoted at the front of the frame, and connected together at the back.

When both signals are at danger, the levers are at the back of the frame, as shown in Figure 4. It will then be seen by examining Figures 5, 6, and 7, that no obstacle exists to prevent lever *b*, which works the points, from being pulled forwards and pushed backwards again at pleasure, thus allowing shunting to be done at the station under the protection of the signals.

In Figure 5 it will be noticed that lever *c*, which works the branch signal, is locked or fastened backwards by the projection on the locking plate *g*. The lever *b*, being at the back of the frame the points are open or all right for the main line, and we should therefore be able to lower the main line signal *a*. On reference to the three Figures 5, 6, and 7, it will be seen that there is no obstacle to this; we will therefore pull it over and lower the signal. In figure 6 it will be seen that in pulling this lever *a* forwards it will slide against the inclined edge of the locking plate *r*, and push it from left to right, thus bringing the projection opposite lever *b*, and locking it in position, so that the point lever cannot be moved until the main line signal is again raised to danger by pushing the lever *a* back to its

first position; which moves the locking plate *r* to its former position, by sliding along the inclined edge of the plate *j*. Suppose we now want to send a train along the branch line, the lever *c* cannot be pulled forwards to lower the signal, because as shown in Figure 5 it is locked by the plate *g*. If, however, we pull the point lever *b* forwards, so as to set the points for the branch line, that lever will press against the inclined edge of locking plate *f* (Figure 5), and move this set of locks from left to right, thus freeing the lever *c*, and by the same motion locking the lever *a* by means of the locking plate *d*. The same motion that frees *a* locks *c*, so that both signals cannot be lowered at the same time. We now pull lever *c* forwards and lower the branch line signal, and by so doing lock the point lever *b* in its new position, by means of the inclined plate *n* and the locking plate *l* (Figure 7), the lever *b* having been moved forwards to the dotted position.

Hence, until the branch signal is again set to danger by pushing lever *c* to the back of the frame again, when the inclined plate *m* (Figure 7) pushes the locking plate *l* to its former position; the lever *b* cannot be moved to alter the points.

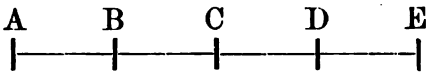
In practice, this arrangement would prove faulty, as the inclined surface of the bars would become worn, so that the locks would not be moved accurately into their true positions; but it serves well to illustrate the principle of interlocking.

The signal and point levers are furnished with spring catches, which drop into notches in the forward and backward positions of the levers, and must be lifted from the notches before the levers can be moved; and the locking apparatus is applied to these spring catch rods, which avoids the strain on the apparatus from endeavouring by force to move a locked lever, and enables much lighter mechanism to be used. It is impossible to move a lever until the spring catch is lifted, and the pull of the fingers upon the spring catch is very small compared with the pull of a strong man upon the lever itself.

Prior to the adoption of the method of signalling and working a Railway known as the *Block System*, the general practice was to allow a definite interval of time between following trains; that is, that after any one train had passed a signal box the signal was put to danger and kept there for a definite number of minutes. At first sight, this seems an ample precaution; and on lines where the number of trains is few, and where the passenger and goods traffic can be kept separate, the system has been found to work well, though it forms no real security against collisions.

In the Block System, instead of a fixed period of time, a fixed distance or space is adopted. The Railway is divided into a certain number of telegraphic districts by signal boxes, in each of which there are telegraphic instruments, enabling the signalman to communicate with the signal boxes on each side of him.

Thus, supposing a portion of a line to be divided into four districts by signal boxes A, B, C, D, and E.



A will communicate with B; B with A and C; C with B and D and so on.

Suppose a train starts from A; A asks B "Is line clear;" B sends back the message "Line clear;" A can then lower his signal and let the train enter the section A B. As the train passes his box, he puts his own signal to danger, and sends the message to B "Train on the line." B sends to C the message "Train is coming," and if all is right C sends back "Line clear," when B lowers his signal and lets the train enter the section B C, at the same time letting A know that the train has passed his (B) box all right. A can now lower his signal to let a second train enter the section A B if necessary. Suppose the train to break down or be delayed between C and D. On passing C, the signal is put to danger, and cannot be lowered till D sends the message "Line clear," but as the train has not reached D, C's signal remains at danger. A second

train starts from A; B signals "Line clear" up to his box. A can therefore lower his signal, and the train enters the section A B. On arriving at B, C sends word "Line clear;" B lowers his signal and the train enters B C; he at the same time sends word to A as before. On arriving at C, as D has not sent "Line clear," C finds he cannot lower his signal; the train is therefore pulled up at C, and the signal at B still blocked. A third train would start from A all right, the section A B being clear, but it could not go beyond B, as C still blocks the signal to let it into the section B C.

Thus, however heavy the traffic might be, and however rapidly the trains were despatched from the terminus of a line, still, so long as the block signalling be systematically carried out, no collision can take place, because an interval of space equal to the length of each district will be preserved between all the trains.

FIG. 4

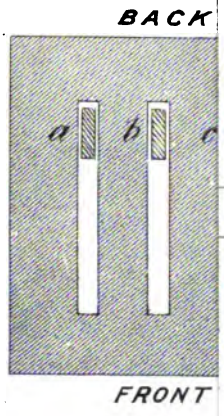


FIG. 8

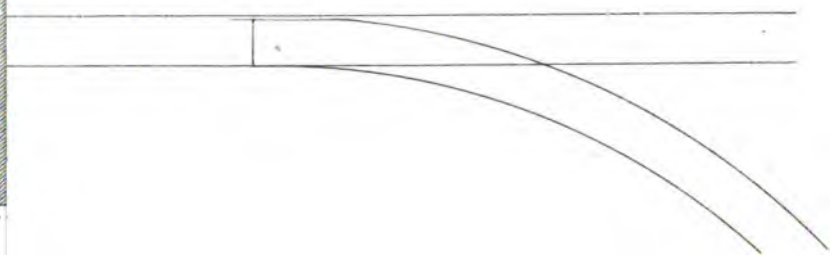


FIG. 1

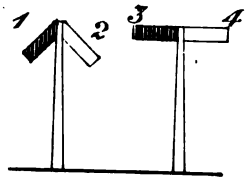
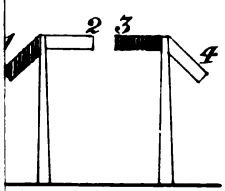
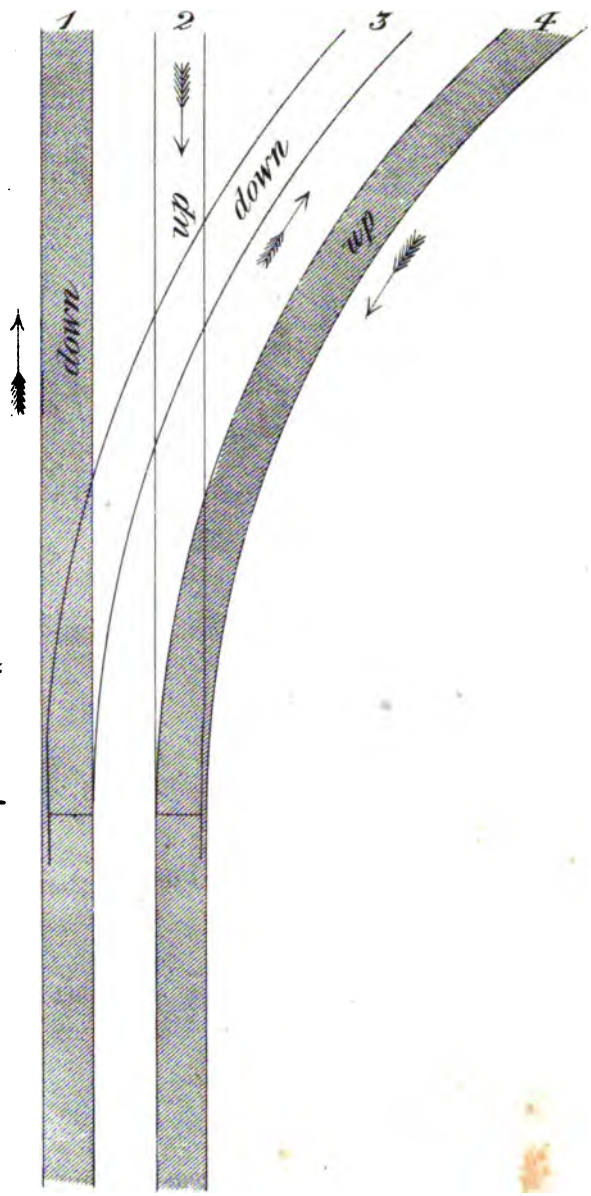


FIG. 3





HOW WINCHESTER CATHEDRAL ILLUSTRATES THE STORY OF RELIGION IN ENGLAND.

By HENRY SHAEN SOLLY, M.A.

The Story of Religion in England begins with the Druids; but of these half-mythical beings we can say very little, except that our Christmas decorations, and especially the honour assigned to the mistletoe, have come down to our own days from their primitive heathen worship. Christianity first crept into this Island silently and unnoticed, probably among the Roman soldiers; but it spread with rapidity, establishing a powerful organization, and the first church at Winchester is said to have been erected as early as the year 169 A.D. If this be so, it was destroyed, and the clergy martyred, in the great persecution under the Emperor Diocletian in 266. Thirty years later, a second church was erected, and this lasted till the Saxon conquest, when a great wave of heathendom swept over the land. Cerdic, the first King of Wessex, converted the church into a temple of Dagon, and was crowned there in 519, and buried there in 534. By the time of his great grandson, however, Christianity, again introduced from Rome under the monk Augustine, had achieved a fresh victory over the Saxon tribes, and a third church was completed in 648. Two centuries later, St. Swithin was Bishop of Winchester, and greatly enlarged and improved the building. He was buried by his own desire outside the north door of the nave, and when it was afterwards wished to remove his remains to the interior, this was delayed for forty days by incessant rain, a story which is obviously the origin of the saying that if it rains on St. Swithin's Day it will rain for forty days afterwards.

In 871, this third church was almost entirely destroyed by the Danes, the last in the series of heathen invaders, and King Alfred, the only king whom England has ever called "the great," did much to restore the edifice.

Saint Ethelwold was a famous Saxon architect who rebuilt the Cathedral from its foundations, adding crypts and introducing subterraneous streams of water into the monastery. A grand consecration was held in 980 in the presence of King Ethelred the Unready and his master Dunstan. This year, however, marks the beginning of a third invasion of the Danes, and a terrible thirty years war, during which the Cathedral again suffered greatly, though to what extent cannot be told. In the end, the Danes under Canute secured the throne (and it was at Southampton that King Canute commanded the waves not to wet his feet, as Canute Road bears witness to this day); but Christianity was strong enough to conquer the Danes, and they became the protectors of what they once destroyed.

From this time, the work done on the spot leaves traces which exist to-day. The crypts beneath the surface of the ground may even date back to St. Ethelwold, and other portions of the building may possibly belong to the latest Saxon times, when Edward the Confessor was introducing so large a Norman element into the church. But the Saxons, generally speaking, were not builders in stone; they loved the open country, and when they did build, they were usually content with wood for their material. A curious trace of their practice may still be seen at a very old church at Headbourne Worthy, near Winchester, where a stone outer wall is obviously built to imitate a wooden wall, the architect not having yet learned how to deal with his new material. The Normans, however, had settled in parts of France which contained magnificent remains of Roman architecture; and it became their pride to apply the grand art of building in stone, and erecting the solid round arch to the religious edifices in which they took so deep an interest. At the time of the conquest, the Saxon prelate, Stigand, was both Bishop of Winchester and Archbishop of Canterbury. He was

deposed, and died a prisoner in Winchester Castle. A Norman, Bishop Walkelin, took his place and at once began a work of building which was continued for the next four centuries. Walkelin wanted timber for his work, and obtained leave from William to have as much as his carpenter could take in four days. Then, collecting an "innumerable array of carpenters," he felled and carried off the whole of a great wood in the prescribed time, and had afterwards to beg very humbly for Royal forgiveness. Stone had to be fetched from far,—from the Isle of Wight, or the coast of France—but energy triumphed over all difficulties, and Walkelin left a noble Norman pile. The finest portion of his work that still remains is the massive central tower, looking just like the keep of a Norman castle, and built so well that it stands to-day, four-square to every wind of heaven, as firm as it was 800 years ago. The north transept also remains to show the most characteristic features of early Norman architecture: it is plain and massive, with but little ornamentation and that of the simplest kind, such as zigzag mouldings; it is built to be useful and built to last. Two stages may clearly be distinguished in this Norman period by observing the space between the stones that are placed one upon another In the earlier stage, these joints are quite an inch in thickness, indicating rough workmanship and the abundant use of mortar. In the later stage, the joints are reduced to one-eighth of an inch, showing a great advance in masons' skill. It is difficult to fix the date of this change; it has been conjectured that the earlier period belongs to Saxon times, but this seems hardly probable.

A most interesting old Font remains from Norman days; it is covered with rude sculpture representing the good deeds and miracles of St. Nicholas, the patron saint of children, and with emblems of the Holy Ghost to be received at baptism.

In 1202 Bishop Godfrey de Lucy entered into a contract for rebuilding the whole of the east end of the Cathedral, where Walkelin had left untouched the Saxon work of St. Ethelwold. Now was introduced the slender pointed arch which distinguished the style of architecture known as Early English. Three hundred

years later, when men awoke to admiration of the classic genius of Greece and Rome, they called all the architecture of the preceding three centuries, "Gothic," as a term of reproach, meaning the same as barbarous; so that we have here a striking instance of how a name originally bestowed in scorn, may outlive that scorn and become a term of highest honour. The "processional aisles" are the earliest Gothic at Winchester, and probably served as a model to the designer of Salisbury Cathedral. The Lady Chapel, specially devoted to the worship of the Virgin, completes the eastern portion of the entire edifice.

There was now a great contrast between this eastern portion and Walkelin's tower, transepts, and nave, where one set of massive pillars and round arches was surmounted by a second set, and these by a third. To-day, all down the nave we see the shafts of enormous Gothic columns running straight up to the pointed arch which supports the roof. This transformation was effected with marvellous masonic skill. About the same time as the Norman Cathedral at Canterbury was pulled down and rebuilt in Gothic style—the latter half of the 14th century—Bishops Edyngton and his successor, William of Wykeham, effected the change at Winchester without any destruction of the old fabric. By closely comparing the work in the north transept with that in the nave, we can see what has been done, how this edge was chamfered off, and that moulding added, and the three tiers of round arches changed into one pointed arch of matchless grandeur. This fact accounts for unusual thickness in the columns of the nave; they are Norman pillars cased with Gothic mouldings.

This completed the main work of the building as it stands to-day, but slighter alterations and additions were continually being made. And they all tell the same tale. The simplicity of Early English architecture finally blossoms into the Decorated style, profuse with gorgeous ornamentation. Of this the Cathedral is full, telling with mute but eloquent tongue of the corresponding growth of ecclesiastical luxury and extravagance. We hear that during a famine in Saxon times, the Bishop of Winchester sold all the rich

vessels and ornaments in the church to relieve the poor with bread, saying, "There is no reason that the dead temples of God should be sumptuously furnished, and the living temples suffer penury." But this example was not imitated later; and the Bishops had most costly tombs built for themselves within the Cathedral during days when deep distress extended over all the land.

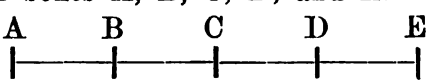
These tombs, or chantries, *i.e.* little chapels where masses might be said for the soul of the founder, are a striking feature in the Cathedral, telling of considerable anxiety on the part of rich prelates to have their souls prayed out of Purgatory. They are too heavily overlaid with ornament to be really beautiful or in good taste. Good taste did not distinguish this period, as we may see from the carved figures of some of the Bishops that lie over their tombs,—horrible emaciated figures, little more than skeletons, representing what was supposed to be the state of the body inside the coffin. But what these tombs suggest most emphatically is the pride of wealth and power. Never was the Roman Catholic Church so wealthy, never making more show, never apparently more prosperous, than just before its great downfall at the Reformation.

And now let Winchester Cathedral teach us a little more about the Reformation and the causes which brought it about. Observe how the later architectural work everywhere provides niches for statues; there must have been hundreds, perhaps thousands, of little statues. They are all gone now: not an image is left. We are told that Bishop Horne took them all away in 1561; if he left any, or if they were brought back, Cromwell's soldiers a century later completed the clearance. Now, what does this fact mean? How was it that one generation devoted itself to the production of images, the next to their destruction? Or look at the great west window; it is a sort of mosaic made up of pieces of broken glass. Probably every window was once filled with stained glass, and most beautiful they must have been. But they were all deliberately smashed at the Reformation because they were full of images. Why this outburst of rage against images carved or painted? Because they represented the most hateful corruption of religion as then taught

Prior to the adoption of the method of signalling and working a Railway known as the *Block System*, the general practice was to allow a definite interval of time between following trains; that is, that after any one train had passed a signal box the signal was put to danger and kept there for a definite number of minutes. At first sight, this seems an ample precaution; and on lines where the number of trains is few, and where the passenger and goods traffic can be kept separate, the system has been found to work well, though it forms no real security against collisions.

In the Block System, instead of a fixed period of time, a fixed distance or space is adopted. The Railway is divided into a certain number of telegraphic districts by signal boxes, in each of which there are telegraphic instruments, enabling the signalman to communicate with the signal boxes on each side of him.

Thus, supposing a portion of a line to be divided into four districts by signal boxes A, B, C, D, and E.



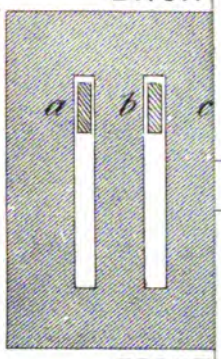
A will communicate with B; B with A and C; C with B and D and so on.

Suppose a train starts from A; A asks B "Is line clear;" B sends back the message "Line clear;" A can then lower his signal and let the train enter the section A B. As the train passes his box, he puts his own signal to danger, and sends the message to B "Train on the line." B sends to C the message "Train is coming," and if all is right C sends back "Line clear," when B lowers his signal and lets the train enter the section B C, at the same time letting A know that the train has passed his (B) box all right. A can now lower his signal to let a second train enter the section A B if necessary. Suppose the train to break down or be delayed between C and D. On passing C, the signal is put to danger, and cannot be lowered till D sends the message "Line clear," but as the train has not reached D, C's signal remains at danger. A second

train starts from A; B signals "Line clear" up to his box. A can therefore lower his signal, and the train enters the section A B. On arriving at B, C sends word "Line clear;" B lowers his signal and the train enters B C; he at the same time sends word to A as before. On arriving at C, as D has not sent "Line clear," C finds he cannot lower his signal; the train is therefore pulled up at C, and the signal at B still blocked. A third train would start from A all right, the section A B being clear, but it could not go beyond B, as C still blocks the signal to let it into the section B C.

Thus, however heavy the traffic might be, and however rapidly the trains were despatched from the terminus of a line, still, so long as the block signalling be systematically carried out, no collision can take place, because an interval of space equal to the length of each district will be preserved between all the trains.

FIG. 4



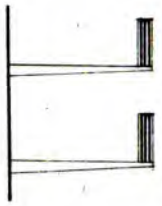
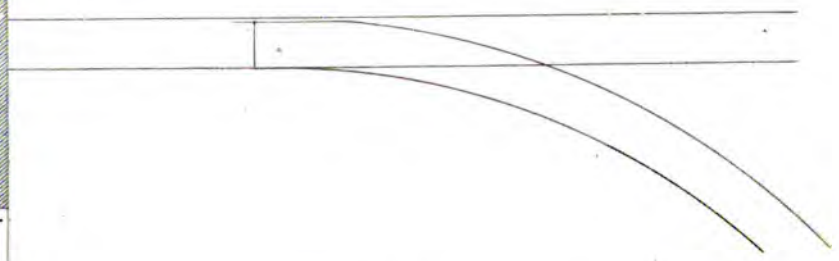


FIG. 8



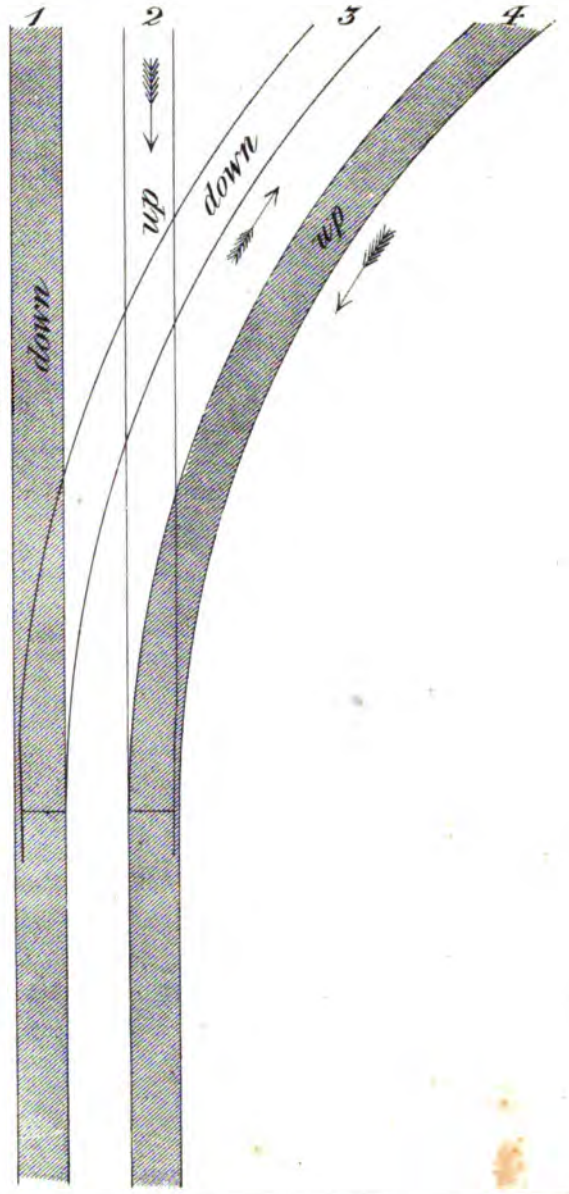


FIG. 1

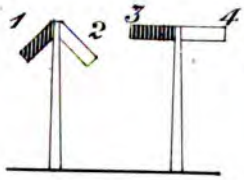
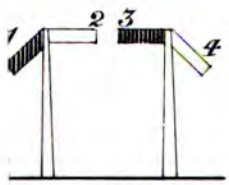


FIG. 3



HISTORICAL CHART

OF THE

UNITED STATES OF AMERICA.

By EDGAR WORTHINGTON, B. Sc.,

Assoc. O.C.; Assoc. M.I.C.E.

Maps have from the earliest days of geographical discovery been found to be the best instruments for imparting exact knowledge of both lands and seas, and although the maps of Queen Elizabeth's reign are in the light of modern discovery full of errors, yet they picture to us a fuller and more accurate record of the geographical knowledge of Columbus' and Raleigh's time than any long description of the relative position of the countries visited by them could convey.

Again, pictures by the ancient masters tell their tale of human joys and sorrows more vividly than the forgotten literature of past ages; and there is many a modern picture which tells a deeper, fuller, and more lasting story than the average novel, for on its one canvas we may find a truer and more vivid description of scenery than a Scott could write; or a group of figures and animals which it would take pages to describe; or, most important of all, a depth of expression in the human face and form which nothing but an artist's insight and knowledge transferred to the canvas could convey. All this may be gathered from a picture without the trouble of reading; but there is one great objection to this mode of communicating thought by means of maps and pictures, viz., that large pictures will not come to us—we must go to them,—and therefore their influence is perhaps not so widespread as that of a more portable article printed in a newspaper or book. Unfortunately

good pictures are still so rare that few people can avail themselves of their pleasant companionship, and the great majority of mankind have to gather their second-hand knowledge and much of their amusement through the more tedious channel of reading. But as the arts and sciences are being harnessed in everyone's service in this 19th century, so the duplication of the best works of art is raising the influence of pictures and maps to a higher level than was ever attained before, and knowledge which has hitherto been gathered only with considerable study and difficulty, may now be obtained for little more than the asking, dished up in a most concise manner, and crying out for admission to the brain direct through the eye.

It is with the object of showing at a glance as much as possible of the history and growth of the United States during the last hundred years that I have prepared the accompanying chart. Many columns of dreary statistics have here found their way from the confused jumble of census returns in their thousands and millions into what I hope is a clear representation of the growth of population in each of the United States, from their birth and throughout their growth to the last census of 1880.

The thirteen original States are seen at the lower end of the fan-shaped diagram, with their small but resolute population of less than four million colonists, a considerably smaller number of people than now inhabit our emerald sister island. Each State is seen to have increased in importance as decade after decade marks a fresh record of its growth in population. Here and there one of the original thirteen States, such as Massachusetts, has sent out a branch to form another State such as the more northern one of Maine. Or again, the broadest red band in the diagram during the year 1790, shows Virginia, which at that time was the most populous State of the Union, increasing only at a moderate pace till she has fallen in relative importance from her former pre-eminence to the fourteenth place among her sister States, owing largely to the exhaustion of her fertile soil by a succession of tobacco crops. This chart shows at a glance the great contrast

between this slow and steady progress of old Virginia and the extraordinary growth of such States as Ohio and Illinois.

The right hand portion of the expanding fan-shaped form represents the newer States, which have not yet celebrated their centenary. The dates opposite each name record the time of their birth as organized territories, while the beginning of the colour marks the coming of age of each territory, when an Act of Congress admitted the aspiring community to the dignity of enjoying State rights. The cause of the rapid growth of these middle and western States is no doubt the equally rapid extension of railways, the history of which will be seen from the black line in the lower right hand portion of the chart, where the total number of miles of railway existing in the United States in each year may be ascertained at once by measuring the horizontal distance of this black line from the centre of the smaller diagram.

A few remarkable historical events of the century are dotted over the fan-shaped figure, and are placed where possible near the State where each event took place; but space in the present instance does not permit of much historical information being crowded on to these two small pages of colour.

On the left an unbroken line of Chief Magistrates, from Washington to Grover Cleveland, the existing President of the United States, succeed one another in regular quadrennial periods, except where the regularity is broken by the tragic death of a Lincoln or a Garfield, or the quiet decease of some other less known man.

On the right hand side is a smaller diagram, drawn to the same scale as the larger one, and showing in blue and pink the nationalities of the six-and-a-half millions or more of foreign-born inhabitants who were living in the United States in the year 1880. Also the simple and pathetic history of the exiled negro race, with their one historical event, the great Emancipation Act of April 9th, 1866, is placed against the foreign-born element; and on the extreme right hand edge is a narrow blue strip representing all that is left of the Indian tribes who, before the white man or

the negro set foot on these shores, disputed alone the possession of this rich land with the wild beasts.

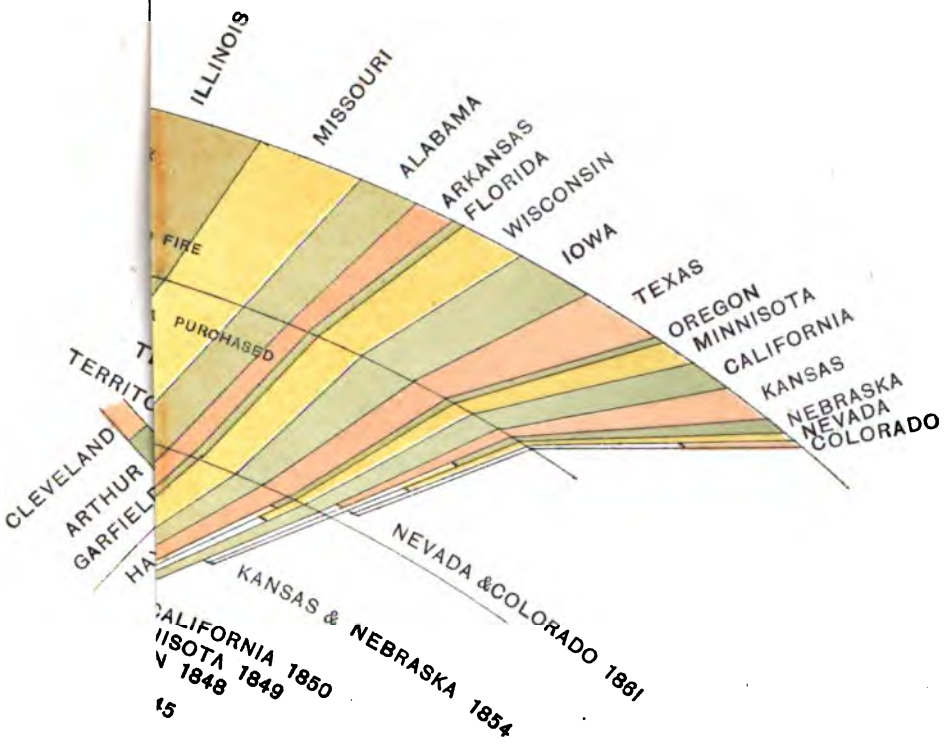
The most noticeable feature in the foreign-born element is perhaps the great mass of nearly two millions of Irish, who crowd the eastern cities, where they help to perpetuate the poverty which, together with that remarkable combination of discontent and good humour, seems so indispensible an attribute of the Irish race wherever it congregates. An even larger number of German-born subjects, also coloured blue, have found new homes in the Union; and the large influx of our own fellow-subjects from British North America, consisting mostly of the French Canadians thronging the cotton factories of New England, is indicated in pink, as are also the six hundred and sixty-three thousand Englishmen proper, the Scotch, the Norwegians, and the Chinese. The only other nations represented on this chart are the Swedes and the French, coloured blue, while I have classed together as "other countries" all those which are so sparsely scattered through the Union as to be represented individually on this scale by the mere thickness of a line. The gigantic influx of Germans and Irish cannot but have an important influence in modifying the American character. But the fusion is not yet complete. The immigrant operatives of New England still speak their own bad French. The colliers of the anthracite region in Pennsylvania have developed a language of their own from their ancestral Dutch. Good German is still the language of large portions of Cincinnati and St. Louis, in which cities, as elsewhere, German national customs have taken deep root. Norway and Sweden have of late years sent out whole villages into Michigan, Minnesota, and the great West, where these hardy Scandinavian peasants, who handle with equal skill the plough, the axe, and the violin, form a most valuable class of immigrants. They also speak their native language; but when that almost certain success, which awaits them, has crowned their industry, their children will learn, in the best schools in the world, the language of the great English nations, and will grow up to work amid peace and plenty, and

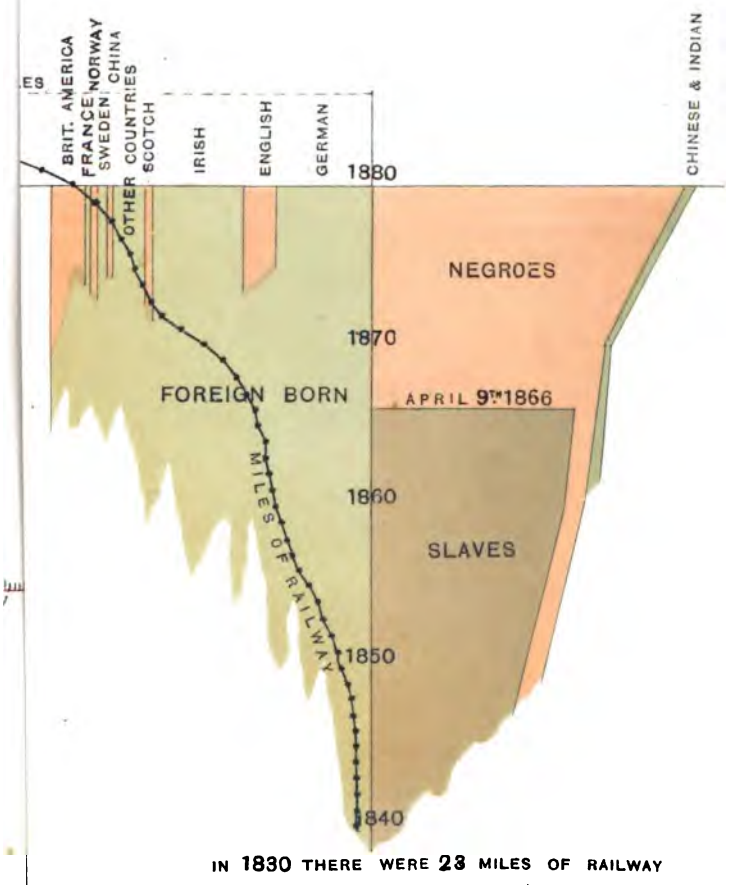
roam over the Union in Pulman cars not many years to come.

What form of character will result from the fusion of all these heterogeneous elements with the original colonists of America is an interesting subject for speculation; but let us hope that, as in melting metals so in the fusion of nations, the good qualities of each will remain to form a healthier and a sounder character, and the bad qualities float away as so much dross or slag.

Very much more might be crowded into this chart if space permitted, but even what there is cannot but inspire hope and perhaps a little pride into the heart of any Englishman, when he thinks over the rapid development of the New England of 1790, together with a few other plantations or colonies into the union of self-governed States, which form our sister English nation across the Atlantic, with her glowing enterprise, her noble strength and vigour, and her friendly criticism of our old world ways.

May we not also be excused if we express a wish that we could recall the overbearing and inconsiderate conduct of some of our ancestors of one hundred years ago, and that this great country and our own might thus still have been one; and also if we express a hope that we and they may yet be united in one endeavour to show the nations of the world the way to universal peace and prosperity through the paths of industry and mutual knowledge, instead of through the past and present ways of war and mutual mistrust.





IN 1830 THERE WERE 23 MILES OF RAILWAY

THE CATHEDRAL CHURCHES OF ENGLAND.

By T. LOCKE WORTHINGTON, A.R.I.B.A.

The Cathedral Churches of "Old England" are one of her most precious possessions, and all must feel what great historical, antiquarian, and artistic interest they possess.

They are intimately connected both with the political and religious movements of our country. The Reformation and many of our most important national changes may be seen mirrored on their old stones. My endeavour will be to briefly explain their foundation, and to refer to their leading points of interest. To awaken curiosity and interest in anyone who may have visited but few of these grand old structures would indeed be a reward.

The word Cathedral is derived from καθέδρα the Greek word for a throne, through the Latin word Cathedra. From the earliest times a throne was erected in certain churches as the seat of the Archbishop or Bishop of the Diocese. This throne is now usually placed on the south side of the choir. People speak of these episcopal churches as our "Cathedrals," whereas the word Cathedral is really an attribute, and we ought to say our "Cathedral Churches," *i e.* churches in which there is a throne to hold the Bishop of the See. The position and decoration of this throne have been of vital importance, from the foundation of the wooden church of the eighth century up to the time of the huge stone structures now to be seen throughout the country.*

* In the old times, in connection with each Cathedral Church there was a Monastic establishment, comprising the Dining Hall, Guest Chamber, Kitchens (having very large fire places), Almonry, Bishop's quarters, Monks' cells, &c. Remains of such an institution are to be found in the "Close" of our old Cathedral towns, the "Bishop's Palace," the "Deanery," &c.

We have thirty-three Cathedral Churches—or thirty-five if Gloucester and Bristol, also Bath and Wells (which include only two Bishops) are counted separately. Manchester, Truro, Ripon, and Liverpool have only in the last few years been made cathedral towns.

Very little is known of our Cathedral Churches before the invasion of the Normans under William the Conqueror, in 1066. In the days of the Anglo-Saxon and Danish rule, prior to the eleventh century, the churches were in many cases built of wood; but occasionally stone buildings of primitive construction were erected. Portions of the crypt at York Minster (constructed in 633) and the interesting subterranean chapel—at the present time almost entirely complete—beneath Ripon Minster, known as St. Wilfrid's Needle, testify that there must have been some stone churches, many of them being underground to avoid persecution. These early churches were of the Basilican form, *i.e.* rectangular.

The causes of the annihilation of these early cathedrals were two-fold, viz., through accidental fire and the destructive hand of foreigners. For example, the original Saxon churches of Crowland, Peterborough, and Ely were all destroyed by the Danes under Hubba in 870. Canterbury was attacked in 1011, when the town was sacked and the Archbishop, Elphege, murdered.

It was, however, when the Normans overran England in the middle of the eleventh century that our enormous existing structures were commenced. Each bishop vied with his neighbour in building a beautiful and durable temple for the worship of God. He would, regardless of trouble, endeavour to collect around him the most expert and practical masons and carvers. Such men, mostly brought over direct from Normandy, would settle with their families close to the proposed structure under shelter of the Bishop's power. Each worked all his life at a portion of the building, and was proud to have trained his son to carry on the work. Often the work of building one of these glorious edifices would pass through three or four generations of workmen.

The Bishop was well content to spend a whole life time in

superintending his workmen, and perhaps after thirty or forty years' work* he would die with the choir alone completed.

Indeed almost the whole energy of the prelates and monks was concentrated on the adornment and construction of a place of worship. To quote the words of a zealous builder, Bishop Wulston, of Worcester, when pulling down the old Saxon Church and erecting his huge massive one, "we wretched people destroy the works of the Saints that we may get praise for ourselves. That age of men (the old Saxons) knew not how to construct pompous edifices, but they knew well how, under such roofs as they had, to sacrifice themselves to God, and to set a good example. We, contrariwise, strive that we may pile up stones, neglecting the while the cure of souls"

The Rev. Edmund Venables tells us that "the Normans made the cross the key note of their whole composition." This is indeed true: the entire building of all our Gothic Cathedral Churches from the foundations to the coping stone was ruled thenceforth by the cruciform idea.

It would be well here to draw attention to the marked difference between the classic temples and our Gothic structures. What contrast could be greater than that shown by the Parthenon at Athens and Lichfield Cathedral Church.

The Grecian temple depends for its beauty mainly on plain wall surface and horizontal lines, and has but little carving. Its walls had no windows and very large doors, suitable for the hot and

* One modern instance may be seen in the nineteenth century of a Cathedral Church designed and constructed on the old principle of making a lasting temple for the worship of God, viz, Truro Cathedral. The choir alone costs £35,000, and has taken upwards of five years to build, from the designs of Mr. J. L. Pearson, R.A. To complete it will cost at least another £40,000, and perhaps five years more labour. Why, I ask, do people blame Architects when, for the sake of economy, they will have their churches built with walls that only just stand the wind and hold up the roof, and which are only one-tenth the thickness of the ancient cathedral foundations. Truro Cathedral and the proposed new Liverpool Cathedral may save the people of the nineteenth century from being hereafter known as "commercial barbarians" and "obstinate utilitarians."

sunny climate, and its roof, which had to throw off but little rain, was nearly flat.

Our Gothic forefathers made steep roofs to throw off the wet, and perforated the walls with windows to make the most of the doubtful sunshine. They depended on vertical lines for effect, and carved *their* temple elaborately from top to bottom, imitating at times the clover of the field and the oak of the wood with almost superhuman exactness.

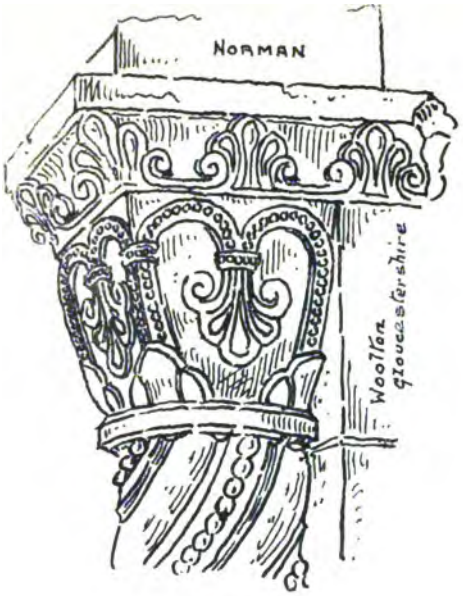
Lanfranc, the first Norman Archbishop, in 1070, set about rebuilding Canterbury. All our present Cathedrals of ancient foundation sprang from the types of Lanfranc's Canterbury and Edward Confessor's Westminster Abbey.

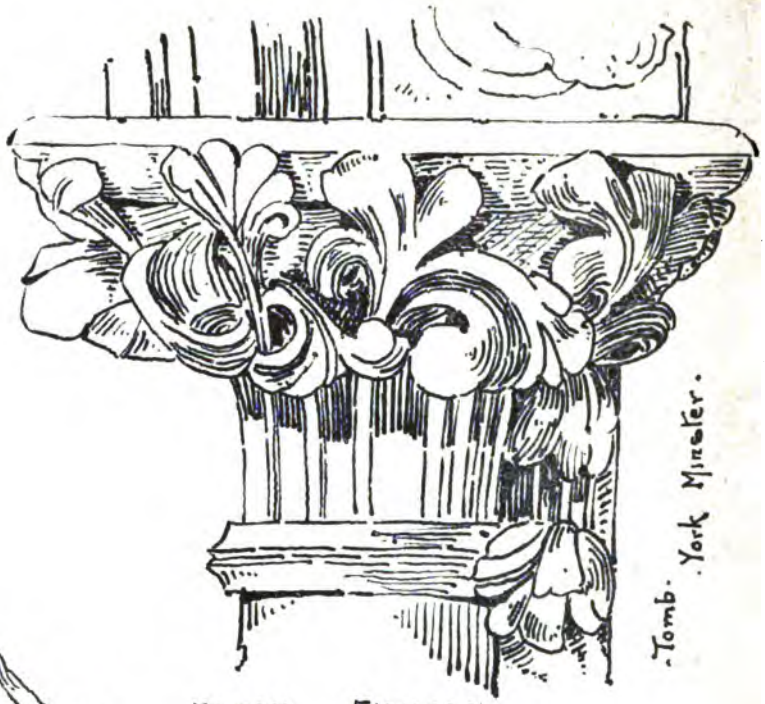
It is interesting to note that this wholesale building of churches throughout the country in the eleventh century, in a foreign style, is an indisputable record of the thorough conquest of the Anglo-Saxons by their Norman neighbours.

Seven of our Cathedral Churches now maintain to a large extent their rugged Norman character, viz.: thick circular columns and strong bare walls, circular-headed windows, shallow but grotesque carving, &c. These are Durham, Chichester, Gloucester, Hereford, Norwich, Oxford, and Peterborough. Many, however, of the others contain extensive Norman remains.

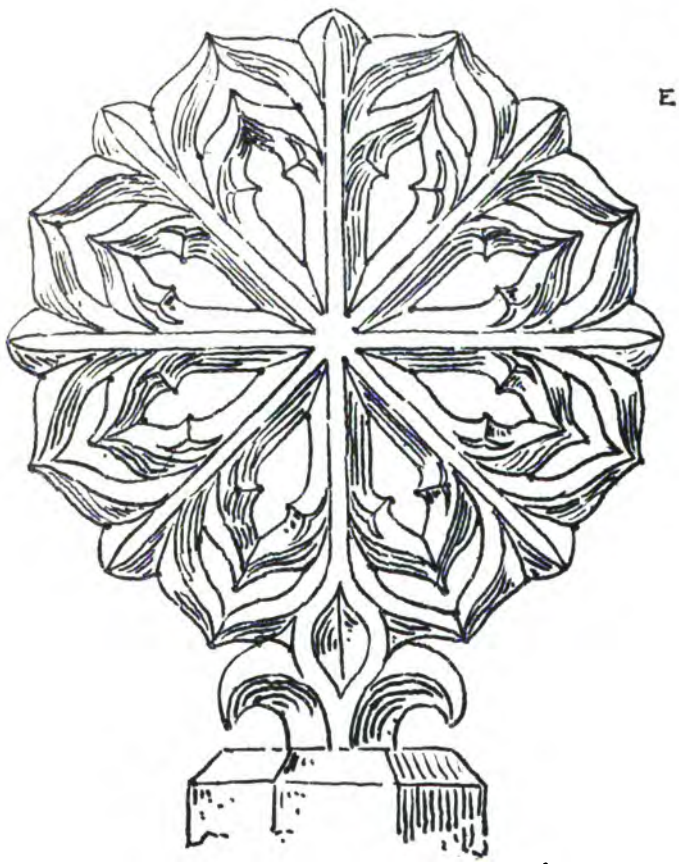
The old crypts at this period are a very important feature. They were low Chapels beneath the presbytery of the choir, the ceiling being supported by columns and vaulting. They are a foreign feature and were never common in England. Winchester, Worcester, Gloucester, and Canterbury, however, contain four good examples.

The twelfth century brings with it the introduction of the noble Gothic style of building. About 1180 the choirs were found to be too small. The numbers of relics of Saints was fast increasing and a sumptuous monument to each was regarded as a necessity. Superstition increased and each monument became the supposed agency of some miraculous cure, and the purses of the monks were filled by the pilgrims. Thus the multitudinous sacred monuments





EARLY ENGLISH



Hedingfield Church. Cambridgeshire.
DECORATED

DECORATED

and the increasing number of pilgrims* compelled the monks of our monastic Cathedral Churches to greatly enlarge their choir. This enlargement went on only at the eastern end and thus it is that the naves of our churches are generally the oldest. There are only seven of the cathedral churches of England that have not had their original choir walls altered, viz., Winchester, Gloucester, Durham, Hereford, Norwich, Oxford, and Peterborough. An attempt to give the various enlargements of any one of our churches would here be a mistake and a complex task, and all I can do is to draw the reader's attention to plans of Canterbury Church before and after the conquest. The area of the church was nearly doubled. Dean Stanley and Professor Willis have given most interesting descriptions of the same. The earliest and at the same time grandest specimen of early English Gothic work is the choir now standing in its glory at Lincoln, designed in 1186 by Bishop Hugh and an architect named Geoffrey of Noyen.

It was at the beginning of the thirteenth century that the Lady Chapel was instituted behind the high altar. It was at this time under the pontificate of Innocent III. that a burst of devotion for the Virgin Mary overran Christendom. Thus we must regard the large space behind the altar of our cathedrals as a private chapel to the Virgin. Very extensive eastern enlargements were made at this time at Ely. One of the most beautiful examples of early pointed work is Salisbury, begun in 1220 and finished in 1258. This is the only cathedral we have complete in this exquisite style, and being built by one generation, it is an invaluable monument of the time of Henry III.

The buildings of the fourteenth century are constructed in what is commonly called the decorated style. The plan of building

* Most interesting evidence of the thousands of pilgrims who visited the shrines in our old churches is to be found in the choir of Canterbury Cathedral. Here the shrine of the martyred Archbishop Thomas Becket no longer remains, but the hard stone pavement is grooved showing where the knees of thousands and thousands of pilgrims rested as they prayed round the remains of St. Thomas of Canterbury.

churches in this century was much the same as in the early English period. The carving, however, was more profuse and the detail more perfected. Most elaborate specimens of tracery were executed, and wonderfully undercut natural foliage carving was of common occurrence. Exeter Cathedral (1280-1369) and Lichfield (1309) are two good specimens of the style.

The Perpendicular style of the fifteenth century ends the glorious four centuries during which all that can be admired in our Cathedral Churches was built. It may be seen in almost every Cathedral, and at Peterborough we have the latest Gothic windows placed in the walls of the earliest Norman work. Its characteristics are large windows with flat arches, rich base courses, scanty carving, square rich towers, and low roofs decorated internally with rich wooden panelled ceilings.

York, Gloucester, Winchester, and Canterbury contribute fine specimens of this style. The only complete Cathedral Church built in this style is Manchester Cathedral, founded in 1422 by Lord De la Warre, but largely restored.

The monuments form a most important feature in our Cathedral Churches. York, Salisbury, Ely, &c., are all full of shrines and monuments of Saints, Bishops, and Kings. The most celebrated of these in olden times were those of St. Thomas at Canterbury, St. Cuthbert at Durham, and St. Ethelred at Ely.

At the beginning of the thirteenth century the stone carved tombs became so numerous that the authorities were compelled to institute a memorial art-work over and on which the pilgrim might walk without damage. Ingenuity served them, and etched pieces of hard sheet brass were let into the pavement. England is the only country which now possesses an extensive series of these interesting memorials, of which there are about four thousand. The best known of the thirteenth century examples is that of Sir Roger de Trumpington (circa 1290), who accompanied Prince Edward in his expedition to Palestine, and is represented cross-legged. This brass is handed down to us and now lies, I can state from careful

and personal examination, very nearly as it was executed six hundred years ago.

The Reformation of the sixteenth century, and the Puritan age of the seventeenth, did much to damage our monumental churches. Our forefathers in the sixteenth, seventeenth, and eighteenth centuries certainly managed, in most instances, to keep the rain from desecrating the interiors of our Cathedrals. But, with almost a total ignorance of their worth, they were scraped, plastered, and often whitewashed, and it is only within the last fifty years of the nineteenth century that such architects as Barry, Street, Scott, and Pearson fitted themselves by study and labour to direct the restoration and undo the mischief of the preceding two centuries.

In conclusion, I would say a word to the reader who may have thought it worth his while to visit but few of these venerable and sacred structures. He should always endeavour to enter a cathedral church by the west doorway, and walk eastward up the nave to the centre of the church under the lantern of the bell tower. What more refined and elevating enjoyment than to sit and listen with unstrained attention to the morning or afternoon service at Ely Cathedral, surrounded on all sides by one of the most beautiful structures that man has made.

THE CHARITY ORGANISATION SOCIETY.

By A. H. PATERSON.

Twenty years ago a number of philanthropic workers among the poor of London met together to try to solve a curious and puzzling problem. There were present men from Bethnal Green and Whitechapel; from Lambeth and Battersea; Camden Town and Islington; Marylebone and Mayfair. The problem they discussed was this:—How came it that though the wealthy classes in London expended annually upon their poorer neighbours the magnificent sum of £5,000,000, these same poor neighbours seemed little the better for it; increased in number year by year; and continued to complain, with the most ungrateful pertinacity, of the greed and selfishness of the rich? It was a complicated question, which has not been answered to the complete satisfaction of everyone even yet, and which probably never will, unless human nature becomes other than it is. These philanthopists of twenty years ago, however, came to a conclusion which was destined to bear much fruit. One reason, they said, why the money given so freely failed to do any permanent good to its recipients, was the lack of anything like organisation among the givers. There were excellent men trying to relieve the poor in all parts of the Metropolis, without doubt, who did all in their power to spend money upon the right people; but they were absolutely at the mercy of a professional mendicant with a clever tale. Then, if the wants of those really deserving, and in need of help, were greater than the means of the individual could relieve, he was obliged to send the applicant away, or bestow a dole quite inadequate to the needs of the case.

Now, if only some plan could be devised whereby these

charitable folk could come into contact with one another, help one another, and know what other workers in the cause were about, they might bring the needed force to bear where the requirements of the case were great, and abstain from helping where there was no real want at all. In this way, and only in this way, reasoned these philanthopists, could the curse of pauperism, which had reduced hundreds of thousands of the London working-class to an appalling condition of moral and physical degradation and misery, be successfully battled with. To accomplish this all the charitable forces at present existing should combine together for the common weal; every rich man with benevolent impulses, but without personal experience of the poor, should know where to go for advice and assistance; and people with time at their disposal, which they wish to devote to good works, should be able to find scope for their energies in direct communication with the poor, without being obliged to attach themselves to any religious sect or mission.

How was all this to be brought to pass? By what machinery, through what agency, could the work be done?

The answer may be found in the title of our paper: *The Charity Organisation Society.*

A huge subject, truly, is this of Charity Organisation. Far too great to be dealt with in the limited space of an article. Some time, perhaps, a great writer will think it worth his while to record the purposes, principles, and efforts of charity organisers in such a way that the public at large may grasp their significance, and do justice to their work. At present the Society which bears this name occupies the proud position of being the worst abused of all charitable organisations in existence. It is the old story. The unpopularity of a doctrine which insists upon the exercise of prudence and judgment in dealings with the poor, and which warns everyone that thoughtless, misguided benevolent action may do incalculable harm.

"Give, give, give to him that asketh of thee," was the old-fashioned watchword, and is still the cry of those who dislike

the "C.O.S." "Give to them that cry the loudest. Turn not the beggar from thy door. Stay not to make cold-hearted inquiry, for fear thy brother starve. What if he be a drunkard or thief? If you turn away from him *for any cause* when he is in want, dare you say 'I am a charitable man?'"

It was against the bitterest opposition that the first charity organisers had to make their way—opposition which will never die, and which is silenced by argument in one place but to re-appear, stormier than ever, in another As soon as it became known that funds were required to establish offices in different parts of London for the collection of facts about the various charities, and where people requiring relief must submit their circumstances and characters to some enquiry before they could be assisted, a cry was raised that money which should be spent upon relief of the poor, was going into the pockets of the paid officials. The central offices at 15, Buckingham Street, Strand, where a complete Register and Digest of all the Charities in England has been compiled; which discovers, and cautions the public against, fraudulent charities, and the individuals who formerly made a lucrative business by extensive begging; and which subsidises by funds at its disposal the poor "district committees"—as the branches are called—in the East end, has had unlimited abuse poured upon it, because at the discussions held by the Council no form of charity finds favour or support unless it proposes to aim at doing some *permanent* good to the poor; which will help men to help themselves.

The creed of the Charity Organisation Society is simple, concise, uncompromising. "Do not," it says, "give *hastily* to any man who asketh of thee, however loud he may cry, or however hungry he may appear to be. Be sure, first of all, by personal knowledge of his circumstances and character, that he is in real want, and that what you are able to give him will supply that want." In other words, the truly charitable man should not consider it his duty to give sixpence to every stranger who looks hungry; but should rather seek among those with

whom he comes naturally into contact, and then not be satisfied with less than taking the poor man by the hand, and pulling him out of his difficulty.

This is what charity organisers preach. The practice they have followed has been to cover the whole of London with a network of district committees, so that there is now scarcely a spot in the Metropolis which does not come within the area of some district office. These offices are open every day throughout the year, and anyone in want of help will find a listener to his troubles; and if he be a genuine man, and not in a state of hopeless destitution, relief adequate to his need will be afforded him. Also, any one anxious to come face to face with the poor, is welcome to attend at the office, assist in the inquiry about cases, the discussion upon their merits, and the distribution of relief. About £15,000 per annum is now spent by the Society in rents of offices, salaries of enquiry agents and secretaries, publication of books, pamphlets, and reports upon the charitable questions of the day. By this fund the forty district committees, and the central office in Buckingham Street, are supported. Besides this sum, £20,000 passes through the hands of the committees in the form of relief under the conditions already mentioned. The number of individual cases dealt with by the Society during the past twenty years may be roughly estimated at 280,000. A careful record of every case, with the character of the applicant, and the circumstances under which he applied, is kept in every office. Thus an enormous quantity of practical information of the ways, condition, and wants of the poor has been amassed, and is being added to considerably year by year. The importance and significance of this work cannot be expressed, however, by any figures or statistics. It is not too much to say that in the opinion of all practical men and women who know the needs of the poor, the great bar to reforms in our social system; to all efforts at improvement of the morals, the comfort, and the well-being of the working class, is the separation between classes; the utter ignorance of, and indifference to, the sufferings and hardships endured by the poor, on the part of the

majority of the "well-to-do." The West-ender and the East-ender, in fact, are strangers to one another. As long as this is the case, £500,000,000 may be spent in charity, and the misery of the poor steadily increase. But once break down the barrier; bring the "nob" and working man face to face; make them mutually recognise the fact that they are fellow-men, speaking the same tongue, and with wants, ideas, hopes and fears, objects and wishes in common, and you will no longer see the bitter cry from the alleys and courts answered by a degrading shower of gold, as in the Mansion House fund of 1885—a bone thrown to a howling cur! It is the bringing the rich and the poor really together, saying to the one, 'know your man to be a *friend* before you give;' and to the other, 'unless you are a *man*, a real man, you are not fit to receive,' that the Charity Organisation Society has done great and good work. A man who takes part in the work of the Society, even for a month, feels a keener and more living interest in the poor about him, though he has not spent a penny, than one who has given money to beggars in the street every day of his life.

The Charity Organisation Society does not pretend to be faultless. A vast number of things are said and done in its name, which had better have been left alone. But one thing it can fairly claim. It does all in its power to place before the world an ideal of noble and disinterested charity. To make this beautiful word mean something other than the giving of pence to a soup kitchen; or the leavings of the table to the outcast at the gate.

Charity! Is there much charity in the life of the wealthy shop-keeper who gives £1,000 on hospital Sunday, and starves and over-works his shop-girls all the year? Was the employer of labour 'charitable' who, in February, 1885, dismissed two clerks at a week's notice, when he knew they were needy and deserving men, and then gave £50 the following day to the Mansion House fund? Twenty years ago such men as these would have posed as benefactors to the human race. But it is not so to-day. Slowly but surely that sacred word 'charity' is recovering its true meaning,—the meaning attached to it by Jesus Christ. The world is gradually beginning

to perceive that Charity means justice as well as generosity; that 'loving your neighbour as yourself' does not mean giving him ten shillings when he wants ten pounds. Give away what you do not want to a stranger if you will; but do not call it charity. An hour of a busy man's time; a penny from a poor man's purse, may be charity; the amount given does not matter in the least; the vital question is, for what purpose was it given, and in what spirit? Charity, to be true and genuine, must mean a man giving part of himself, however small, for the sake of one he loves.

And in so far as the Charity Organisation Society has brought the world to feel this, and to realise the significance of the doctrine as concerning each man's duty in life, be he rich or poor, prince or peasant, it has justified its existence, and deserved its name.

THE DEPRESSION OF TRADE.

By ARTHUR HOLLAND.

What is meant by this expression "Depression of trade?" It means an *absence of profits* in almost all directions. The effect of such absence of profits is known to all. The great industries seem to be paralysed—collieries are idle, mills are silent, furnaces blown out, shipbuilding yards empty, hundreds of thousands of hands out of work, pawnshops full, and tradesmen unable to give more credit —gloom everywhere.

What are the causes of this state of things?

A Royal Commission has been recently inquiring into the causes of the present or late depression. It has concluded its labors and reports that the chief causes are over-production of goods, a diminished buying power of a large portion of the community owing to the fall in prices of agricultural produce, and to the foreign competition and foreign policy of protection.

There are sundry minor causes for the depression, such as the Limited Liability Acts—a cessation of demand for goods—deterioration in quality of goods—fraudulent marking of articles—excessive cost of carriage of goods. The whole report, or series of reports—for the committee have reported in batches—really tell us nothing very new.

The chief cause is now, as it has usually been, over-production; and this may be said to be an unavoidable cause.

All know the quotation: "There is a tide in the affairs of man."

There certainly is a tide in the affairs of business men, and the whole course of trade may be compared to the rise and fall of the tide.

Suppose we track that tide—begin at low tide—slack tide and trade, when the depression is at its very worst—weighing heavily on all industries and in all directions.

Something, seemingly some lever, is wanted to lift the heaviness so that the stream of trade may flow on again. That lever in recent times has come generally from the rail and iron industry. Enterprising individuals, ever on the outlook for the right moment to initiate new undertakings, determine that prices for rails and iron cannot get lower and the purchasing commences. And I would here mention that in Europe alone the rail-mileage increased during the years 1850-60 sixteen thousand miles, a yearly average of one thousand six hundred miles; in the next ten years the average was three thousand three hundred miles, in the following ten years it was three thousand six hundred miles, while in the three years 1881-3 the average was nearly five thousand miles, but in 1884 only three thousand miles were added, and in 1885 barely two thousand miles.

I have been unable to find the periodical augmentations of miles in other portions of the world, but in 1840 the world's total rail-mileage was

estimated at	5,200
in 1860 at	67,000
in 1882 at	250,000

These figures being only for leading railway lines, and not including tram rails and small lots.

The estimated quantity of rails laid down is forty million tons.

Now some ten thousand tons of rails are required for every fifty miles of double track, and besides the rails there are the iron chairs, fastenings, sleepers, &c., and you can consequently readily understand how a demand for a few hundred miles of rails soon sets the rail industry in motion. This infuses life into the iron and thereby into the coal industries, and all these in their turn into the carrying trades. More hands are wanted in all of them, money in the form of wages begins to circulate more abundantly; more buying of other

commodities than the mere necessaries of life takes place; shops feel the increased demand, and they order more freely from manufacturers. New life is slowly but gradually infused into all the many industries which exist to supply the manifold wants of the population. Then again, fresh rolling stock is required by the railways, more vessels are wanted for carrying goods, and the trades and industries connected therewith feel the briskness; labor gets absorbed more and more first by one, then by other industries; profits increase, new factories spring up—more competition for hands—wages continue to rise, and the tide of trade keeps flowing onward, each addition to prices and wages stimulating again the demand for commodities and enabling the community to buy more freely not only at home but from all parts of the world. Now such imported goods have to be paid for, and get paid for by home products, and so again trade is fostered, and action and re-action take place, until at last such a level of prices, both of wages and of goods of all sorts, is reached that buyers become shy—pause, and hesitate to order more. That pause may be said to denote "High Water Mark."

Now in the case of manufacturers, when that high water mark is reached, they are caught, not only with stocks of goods that cost high prices, but also with a large productive capacity in full swing, because they rarely seem able to contemplate any cessation of demand on a rising and profitable market. They suddenly find, however, a lessened demand for their goods—they begin to unload stocks at reduced prices, and from that moment there is a downward movement in profits. With lessened profits, wages get reduced, less money circulates, trade becomes dull, wages are again lowered, strikes occur, hands are thrown out of work, buying gets restricted to only the absolutely necessary articles, profits vanish, merchants, those engaged in professions, and the gentry, all gradually feel the effects of this dull trade; retrenchment takes place, and so on until once more the low water level is reached and the periodical distress prevails. That is a brief description of the course of the business tide.

From 1837 to 1847
„ 1848 to 1857
„ 1858 to 1866
„ 1867 to 1875

when the present depression commenced, has that tide risen and fallen. The 1847 depression appears to have arisen from the reaction after the first burst of the railway mania. The 1857 depression resulted from the reaction of the Crimean war. That of 1866 was the sudden collapse after the American war results. The rapid development of industry from 1870 to 1875 followed the Franco-German war, when the destruction and stoppage of enterprise by that war had to be made good. From 1875 until recently the depression has gradually extended, with here and there slight variations, but now trade seems at last improving, and this is evidenced by what are termed the index numbers of the chief commodities—coffee, tea, sugar, tobacco, wheat, meat, cotton, silk, hemp, wool, indigo, oil, timber, tallow, iron, lead, copper, leather.

They are based on values and quantities compared with a standard of 1845.

In 1857 they were 2,200
1865 „ „ 3,564
1870 „ „ 2,689
1872 „ „ 2,947

and since then they have fallen gradually year by year with a little variation until last year, when they went down to 2,023. On 1st January, 1887, they rose to 2,059, and as they are regarded as a rough sort of trade thermometer the turn of the tide would seem to have taken place. But there are indications all round of the improved state of trade. The iron industry is brisk, and with it the flow of trade is extending to other industries as already described, and we seem once more on the eve of a gradual increasing prosperity. That this revival may take some time to reach many classes is open to little doubt, but all must ultimately benefit by it.

It will thus have been seen how over-production is a great factor in producing depression and distress. It is of course impos-

sible to regulate over-production, and it may be deemed an unavoidable cause of depression of trade.

Now as regards the fall in prices of agricultural produce, they may be considered to a limited extent to be not altogether unconnected with the fall in prices of other commodities. The seasons, however, here and abroad have much influence also on such prices, and this cause of depression may also be considered to arise from circumstances beyond our control. But the fact remains, that in 1885 the losses of those engaged in agricultural pursuits here amounted to nearly £43,000,000, a curtailment of so much purchasing power by that portion of the population which must have had an important influence on the demand for manufactured goods.

Now regarding foreign competition and foreign protective policies, which naturally somewhat curtail our exports, and so help to limit the outlet for our over-production, if you consider that our whole foreign trade has been maintained at an average of £667,500,000 for the last ten years, as against £655,000,000 in 1875, this cause cannot have had a very serious effect on the whole trade of our country.

That some of the foreign nations have assisted their countrymen to push their commerce by means of their consular agents is well-known, but when we find that the number of Wool, Flax, and Jute factories have actually decreased in France in recent years, and that in Germany since 1875 the numbers of persons employed in textile manufactures have also lessened, there cannot be much cause for alarm that in those industries our trade will suffer from foreign competition.

The other causes of depression as named in the report need hardly be dwelt upon at length. Limited Liability Acts being considered to have fostered unsound concerns, and deterioration of goods is a natural result of bad times. Fradulent marking of articles is a meanness which with exposure may be remedied. Excessive cost of carriage here on sundry articles undoubtedly enhances their cost, diminishes profits, and aids the depression to some very small extent

We have seen now what the tendency of business is, namely to expand and contract periodically. To counteract this tendency as much as possible, *i.e.*, to steady trade as it were, the aim should be to keep the cost of production low so that some profit may accrue, and so therefore that the working population may be kept fairly occupied and wages fairly steady.

Now the working population of the United Kingdom consists of about

	6½ Millions	Industrial Classes
	1 „	Commercial „
Total	7½ Millions	Trade and Manufactures
	2 „	Domestic Classes
	¾ „	Professional „
	1½ „	Agricultural „

and as regards the last-named, I would mention that it decreases 15 per cent. each decade, being absorbed into the towns.

The domestic and professional classes are naturally very dependent upon the prosperity of the other three classes.

The rest of the population live from the labors of these twelve millions, and are particularly dependent on the prosperity of those engaged in trade, manufactures, and agriculture.

Now in order that the two first—trade and manufacture—of these sections may thrive, the cost of production should be as low as possible: the cost of all materials must be kept low. This can only be attained by abolishing all the multifarious expenses and charges imposed upon all imported materials and goods by reason of our Customs Laws and Regulations, and this points to the policy of real Free Trade. For with real Free Trade established, cost would be kept at a minimum, and no unnecessary expense, no waste, would attach to raw materials.

Again, many industries—notably the iron and coal—suffer from the heavy royalties imposed upon the production of minerals by landowners. This abuse or injustice points to a reform of our Land Laws; and this reform, coupled with a cheapening and simpli-

fication of the cost of transfer of land, will have a material effect on the prosperity of the agricultural classes, and by that means on the wages of those engaged in town industries.

Another serious drawback resulting from our present system of Land Laws is that of the leasehold system, which entails in very many instances most onerous conditions and burdens on manufacturers coming within its grasp, and which undoubtedly does cripple very many of our industries that otherwise would flourish vigorously. Why should not our Land Laws be so amended that the cultivator can have a direct interest in the land with facility, and at least cost? Witness Jersey, an island under both Home Rule and Free Land Laws, where the average yield per acre is double that of an almost similarly situated island, the Isle of Wight.

If this result could be attained here, the agricultural classes would not flock to the towns, would not thereby cause wages to be there lowered, but would be prosperous on their own lands and enabled to purchase freely from the industrial manufacturing classes; thus assisting to absorb production, while at the same time they would be helping to steady both wages and profits.

One great cause of the heavy cost of production has not yet been touched on, and that is the enormous and increasing burden of both Imperial and Local Taxation. The Imperial Taxation has increased during the last twelve years by seventeen and a half millions of pounds, while Local Taxation has during the last twenty years run up from thirty-six millions to nearly sixty-six millions. It stands to reason that all this great expenditure must be furnished by the industry of the nation, and it behoves all to be constantly resisting the tendency to augment Taxation in one form or another.

I have refrained from coupling the Depreciation of Silver with the Depression of Trade, because although the value of silver has gradually fallen from sixty pence per ounce in 1873 to forty-six pence now, and has consequently seriously affected those holders of foreign imported produce, notably from India, that were bought at the higher exchange, yet that fall has materially lessened the cost

of very many articles used by our manufacturers, and has thus aided the production of goods at a lower cost and at a greater profit, and has thus benefited the community, while at the same time since the natives—the growers abroad—are not prejudiced by the fall in silver (they getting paid always in rupees), the increased demand for their products puts money into their pockets and thus is created a better demand for our productions and manufactures.

Nor do I allude to the Bank Act, which in times of depression is apt to cause a severe screw to be put on all industries by its arbitrariness in varying the rates of discount for money, because during this last long period of depression its influence, owing to the scarcity of demand for money, has not been seriously felt.

But we must not lose sight of the unsettled state of both home and foreign politics for very many years—a condition of things, which naturally creates distrust, and causes men to be more than usually cautious before embarking in commercial undertakings.

It will thus have been seen, that depression arises from a variety of causes, some unavoidable, some capable of removal or mitigation. The chief cause, however, is over-production, and the aim should be to lessen the reasons of that. This can best be done by the maintaining a steady demand for goods, a steady level of profits, a steady amount of work, and all this would be much facilitated by Free Land and Free Trade Laws. With these, the expansion and contraction of trade would be more gradual, more easily guarded against than ever has been the case, than is now, and than can be with the existing state of things under the present system of absurd restrictions.

THE ESCALADE.

By WALTER GREG.

"In the night of 11th December, 1602, the Savoyards attempted to obtain possession of Geneva, and would have scaled the wall of the Corraterie if the citizens had not promptly repulsed them."

Evening has fallen on the little town
Where Rhone's swift waters issue from the lake;
And all is silent, save the soldier's tread
Pacing the rampart, as in duty bound:
While the pale new-born moon looks coldly down
On the deserted streets. The gloomy moat,
Glazed with a sheet of ice, casts back her ray
With dull reflection. All the earth is bound
By the chill iron band of winter's king;
And o'er the marshes, by the river's side
White mists rise slowly; while the stars above
Twinkle more brightly for the icy air.
But lo! along the Chênes and Bonneville Road,
What is that sable mass, that, like a wave,
Towards Geneva rolls so silently?
As a huge snake, in some far southern clime,
Crawls stealthily along towards the bird
That it will make its prey, so this dark mass
Creeps towards Geneva. Ha! the flash of steel!
Again, and now again, the moonbeams glance
On helmet, buckler, arquebus, and spear!
It is an armèd host, that thus, by night,

In time of peace, with most foul treachery,
Comes, with the Duke of Savoy at its head,
Thinking that suddenly, by a surprize,
This so fair city, long time coveted,
May now change hands, and henceforth be to them
A firmer stronghold even than before
It has to others been in days gone by.
Now, Genevese, arise! and show that you,
Fighting against these traitors for the right,
Are worthy of your fathers, and to bear
The name of the proud city where you first
Beheld the light of day. To arms! To arms!
Strike home, for freedom and for life! To save
Your wives and children from captivity!
Strike home! and let the blow be swift and strong!
Sound the alarm! Blow trumpets, and beat drums!
And rouse the soldiery, that each may know
And be prepared to meet the enemy.

But no. No brazen trumpet's sounding blast
Breaks in upon the silence of the night.
No drum's alarming rattle in the street
Startles the burgher from his first deep sleep.
Silence still reigns, and the pale moon looks down
With cold unpitying gaze upon the town.

Hark! In the distance, through the cold, sharp air
What is that sound, which strikes upon the ear?
'Tis but the sentry's challenge on the wall—
It dies away, and all again is still.

Now the Savoyard host has reached Champel—
Champel, that half a century ago
Witnessed Servetus' martyrdom, condemned
By Calvin's cruel order to the stake.

And now the hostile crowd no longer moves
Like the black snake it seemed an hour ago.
But, as each column, coming down the slope,
Reaches the plain, it spreads, and breaks like spray.
And now dark figures may be seen to move
And crouch behind each bush, and then speed on
In twos and threes, nearing the town with stealth.
They pass across Plainpalais to the fosse
Called by the townsmen "la Corraterie;"
And then they pause, and crouch, and wait, until
Their comrades shall arrive. And when at last
All have assembled, and the time has come,
Two soldiers creep across the frozen fosse,
And drag with them a ladder, which they fix
Against the rampart wall; and others cross.
And now another ladder is upreared—
And yet no sound is heard above, to tell
That they have been discovered— hope is strong
Within their breasts, as they begin to mount.

And now the foremost soldier, cautiously
Raising his head above the parapet,
With wildly throbbing heart and lips compressed,
Looks anxiously around; while those below,
In breathless silence strain their eyes to mark
By their bold leader's gesture, what he sees.

Meanwhile, the sentinel above their heads
Walks slowly to and fro upon the wall
All danger unsuspecting. Now he nears
The spot where lie in wait his deadly foes,
And here he turns, and paces back again:
But even as he turns, as quick as thought,
Three figures leap upon the parapet,
And then slip down again within the wall,

And crouch in the black shadow that it casts,
Until the sentinel shall pass again.

He comes, all unsuspicious of the fate
That waits upon him · Now he nears the place—
But sudden stays his steps. Has he then heard
Som· sound which has alarmed him? which may yet
Save his dear city from her grasping foes?
No! He but stops to watch the brilliant course
Of that bright star which shoots from out the sky
To hide itself in Jura's wooded breast—
'Tis gone—and he resumes his lonely march—
Does he not mark, there in the bastion,
How dark the shadow of the parapet?
No! He has passed it! Now that shadow grows,
And rises slowly and creeps after him!
—A quick, short struggle, and a smothered groan—
And he is gone to join the meteor bright
He watched, but now, sink to its silent grave.

* * * *

Another sentinel has shared his fate—
And more Savoyards mount, and all advance
To where the next watch stands—nor he, as yet,
Has anything observed which may arouse
His sleepy senses and half-frozen brain
To any sense of danger—there he leans
Upon his arquebus, and gazes forth
Into the darkness of the icy night,
Thinking how long 'twill be before his guard
Will be relieved, and he may go to seek
Rest, warmth, and comfort on his lowly couch.
But such a night's too cold to stand and think;
And so he turns him, to resume his march.
What makes him stop again so suddenly?
—He gives a loud, quick cry, as of alarm;

For he has met his foemen face to face!
They are upon him like the lightning's flash,
And stab him through and through! But ere he dies
He renders one last service, and a shot
Rings through the clear night air. And now the storm
Bursts like a thunderclap upon the town!
The small Savoyard host upon the wall,
Seeing that stratagem no more avails,
Sets up a shout of triumph, which awakes
The sleeping echoes of the grim black walls
And makes them shout again, as though to call
The sleeping soldiery to their defence.
Now Genevese! To arms! Quick, to the wall!
E'en now 'tis not too late to save your town
From the foul blood-stained hands of her sworn foes!
Upon them now! Avenge your comrade's death,
And hurl the traitors headlong from the wall!
They come! They come! A sound of hurrying feet
And clashing steel is heard athwart the night;
And suddenly a torch's gleam is seen,
Which shows the soldiers forming in their ranks—
Then darkness falls again. There is a pause,
Which lasts but for a moment, and is broke
By the loud war cry of the Genevese
As down the slope they sweep upon the foe.

Then for a space confusion reigns around,
And o'er the clash of arms sharp cries are heard,
As mortal blows are dealt, and men struck down.

The hostile band at length is backward borne
To where the river hurries, swift and dark,
Between steep banks. But now the Genevese
Stop for a moment, and turn back, to hurl
The scaling ladders, with their living freights,
Down on the ice-bound moat, where they lie still,

All crushed and bleeding men. Meanwhile, their friends
Upon the wall have reached the river gate;
And here they hammer, hoping to break in
The ponderous doors, and gain the inner town.
But the great gates hold fast; and overhead
A woman (still employed in cooking food
To warm some frozen sentinel, so soon
As his night watch is done) hearing the noise
Lifts a great cauldron, full of boiling soup,
From off the flaming logs, and carries it
To a small window high above the gate,
And empties it upon the crowd beneath.
A dozen throats send up a yell of pain!
They turn to fly, but as they turn are met
By swords and lances. Then they fight for life,
As fights the wolf at bay, with no escape.

But yet a little while, and the last man,
Still struggling is hurled from off the wall,
And the black waters swallow up his form.
Geneva's safe! and a wild shout of joy
And gratitude to Heaven fills the air!

* * * *

Two centuries and three score years and ten
Have passed away since that eventful night.
But in Geneva's armoury still are shown
The scaling ladders of the treacherous host;
And there too you may see their pikes and bows,
Swords, spears, and helmets. But above them all
In the chief place of honour there is hung
An iron cauldron, black and worn with time.
And every winter, when the night comes round
On which these deeds were done, the streets are filled
With masquers, and good citizens rejoice
Over the downfall of their ancient foe.

REMINISCENCES OF MY BOYHOOD.

By HERBERT NEW, Junr.

I have heard some declare that they remember what happened when they were three years old. I must confess that my memory is not of that tenacious character. I rather suspect that in such cases the memory has been refreshed, and the incident is only related at second-hand.

On a green slope within the confines of the ancient borough of Evesham I first saw the light in company with my twin sister. This event I do not remember, but nevertheless have no doubt of the fact. Among his other accomplishments my father had acquired no little skill in the art of drawing, which he turned to a cruel use in my early days in a manner I shall never forget, though the incident is of the most trifling importance in itself. He drew me – poor, frightened me—in the act of taking flight down the staircase from the approach of a favourite cat! My very shrieks seemed depicted in that ruthless presentment in black and white of me and the poor "harmless necessary" creature, and I think I see her now. They say it is well to begin with a little aversion, and now in my maturer years I have formed a great affection for the feline tribe.

Evesham is a pretty little market town on the river Avon, in the midst of green fields and fertile gardens. As seen from my father's house the landscape is disfigured by no unsightly tall chimneys; but the town seems to repose in quiet, much as it did in the days of the monks of old, who dwelt in the Abbey by the river. Fourteen miles from any town of its own size, it is surrounded by a large tract of fresh green country, affording ample room for a ramble among peaceful villages dotted about at intervals, or by the bank of the river as it takes its winding course through the vale.

In the midst of these surroundings, the first eleven years of my life were spent, and all my earliest recollections are centred in the dear old home on Green Hill. I well remember the house as it used to be, with its portico in the front and a lovely bush of red roses on each side. And then alterations were made, and men were at work for ever so long, and when it was all over the house seemed to have grown to nearly twice its size, and the old porch had to go, and the roses as well, and many of the old trees and shrubs. My father used to read aloud in the evening, and then I made my first acquaintance with "Pickwick," and remember the immense delight it was, and how my father, who was otherwise a very good reader, could not get on sometimes for laughing We all grew to be very fond of books, and were taught to be scrupulously careful in the use of them, so much so that my copy of "A Treasury of Pleasure Books," given to me by my grandmother twenty-eight years ago, is now in my possession and as clean as the day I had it. And it must not be thought that the books were not used, for I knew it almost by heart. We used to read the Bible on Sundays, and the pictorial editions were of course the favourite ones; but I was sorely puzzled with one picture under which was written "Jephthah's daughter goes out to meet him," and I never could quite understand who went out to meet who. The bound volumes of the *Illustrated London News* were an endless source of delight, but a large double-page picture of the Falls of Niagara frightened me terribly, so that I always turned away from the book when we came to it.

My early education was given at home by a succession of governesses, but when I was old enough to learn Latin and Euclid I took lessons in these subjects from the Rev. J. C. Lunn, who was minister at Evesham, till I went to Lancaster to school. I have a vivid recollection of the tears that were shed in the process of fixing in my memory the terminations of that detestable word "musa," whilst undergoing more than one sentence of solitary confinement.

The house just above ours on the Hill was occupied by Mr. Ferdinand Field, who afterwards married my aunt He devoted much of his spare time to his greenhouse, which was filled with

choice flowers, and he was also very clever with his lathe and made some wonderful things in the way of candlesticks, spill cases, ornamental table tops, &c. He had spent some part of his life in the United States, and I well remember his calling at our house with the poet Bryant and another American gentleman whose name I forget. They came to see my father, whose literary tastes and acquirements were a sort of centre of attraction to any men of note in the literary world who visited the town, and his house was always open to receive them. I had learnt to connect the name of Bryant with the hymn in Dr. Martineau's collection "Whither midst falling dew," but it is too long ago to recall any details of the visit. One among these literary men came to be one of my father's most devoted friends, and a second father to me. I refer to the late John Langton Sanford, a recognised authority on the Commonwealth period in English history, and the author of works on the subject—a man of a singularly gentle disposition, with a constant flow of good spirits and an unusually fine sense of humour. His arrival at Green Hill was hailed with delight by us all (there were six of us), and he was most generous in the bestowal of his gifts, which of course we fully appreciated. The romps and the games we indulged in were thoroughly hearty and delightful. We used to play at "Chapel" on Sunday afternoons, and occasionally he gave us a sermon. His imitation of the style of the Methodist or Low Church parson sent us all, young and old, into fits of laughter. In later days, when someone had been at the piano, nothing would serve but he must give us a song. Without the least knowledge of music or ear for it he would sit down at the piano and imitate some imaginary singer, accompaniment and all, and amuse us immensely with his runs and trills and high sustained notes Many is the pleasant walk I have had with him in the neighbourhood of Evesham, and in after years I enjoyed more than one summer holiday in his company.

At eleven and a half a great event in my life occurred. I left home for the first time to go to school. Evesham was not large enough to possess a good school of its own, so we had to be sent

away to be educated. In the choice of a school my father very naturally turned to the establishment of an old schoolfellow and a relative. My brother Arthur and I were accordingly despatched to try our fortunes in Queen Square, Lancaster, and if it were not for this event these pages would not have been written. I suppose schoolboys suffer in a greater or less degree from home-sickness, and I have a vivid recollection of several slight attacks of this malady, although we were treated with every possible kindness and consideration by those in authority over us.

Of my school life I have the pleasantest recollections—of the work and of the play. I was filled with a childish dread when I learnt that swimming baths had been just opened in the town, and that we were to go and learn to swim. I had hitherto successfully resisted the tempting bribes of sweetmeats and other good things and persistently refused to bathe in the sea when my weaker brethren had succumbed to the tempter. But now it was no use, so I determined to conquer my fears, and by the end of the first half year I gained one of the half-crowns presented for swimming the length of the bath, and ever since I have been devoted to the water.

The annual three day's trip to the Lakes was of course the best remembered event of my school days, the hours of play standing out in relief (in more senses than one) above the routine of work, and these were really fine times in the annals of the school, though wet weather sometimes marred the pleasure somewhat. Then there were the paper-chases over the beautiful country that surrounds Lancaster; the bonfires in November (*not* on the 5th, out of respect to the Catholics), preceded by the half-holidays spent in cutting the gorse; the occasional excursions to Clougha, Farleton Knot, Bolton Abbey, Malham Cove, Morecambe, Hest Bank, &c; the game of "Indians" on the Moor, the boating on the Lune, the breaking-up parties, and the acting, &c. All these I look back on with unmixed delight. I should hardly "make up" as "Mrs. Malaprop" now, but I did so at one of these annual events ere I became "bearded like the pard."

Four years and a half was my allotted time at school, and I was destined for matriculation at the London University. So my studies were directed to this end, and matriculate I did just after I was turned sixteen. But I am getting on too fast.

To turn once more to my home on Green Hill. Mr. Lunn was succeeded in the pulpit by the Rev. John Gordon, who became much attached to my father, and a constant visitor at the house. His vivacious and interesting conversation had a sort of fascination for me, enriched as it was with anecdotes of men he had known during an active life, and I always listened to him with rapt attention. I imbibed from him and others I was brought in contact with strong Nonconformist sympathies, and eventually took my share in the work of public agitation on the subject of Church and State. I remember a very interesting occasion in this connection, when the late Edward Miall dined at Green Hill with a company of local Nonconformists, and gave us a speech after dinner I was much impressed with the quiet earnestness of his manner, but his voice was not at all strong His subject was the Elementary Education Bill, which was causing a great deal of discussion at that time, especially among Dissenters To pass to a man of a different kind. The author of "Tom Brown's School Days," Mr Thomas Hughes (now His Honour Judge Hughes), came to the town many years ago to take part in a meeting at the Mechanics' Institute, of which my father was president, and I have a slight recollection of the event But I have a vivid recollection of being the cause of some innocent amusement to a man well known by his pen throughout the literary world—I mean, Mr. R. H. Hutton, the editor of the *Spectator*. It is many years ago. The scene was the top of Bredon Hill, in a hollow on the side of the hill looking towards Malvern. My father had brought some friends over from Evesham for a picnic. The feast was finished, and the greater part of the company had dispersed for a ramble, but as luck would have it I was bidden by my father to open a bottle of some effervescing liquid. I succeeded without mishap up to a certain point, but in the nervousness of the movement, no doubt

brought on by the presence of the learned editor and his wife, I managed to break the glass which was to contain the precious liquid. My father was annoyed at my carelessness, and in an unguarded moment exclaimed "You jackass!" The appellation did not strike *me* as a particularly humorous one, but it seemed to tickle the editor and his spouse immensely, for I heard the word repeated audibly between them with a chuckle of evident amusement, and I have never forgotten the incident to this day.

I have already referred to the summer holidays I spent with Mr. Sanford In 1870 we journeyed through Devonshire and Cornwall together, winding up with a trip to the Scilly Islands. This was my first sea voyage, and the water was much agitated by a so-called "ground swell," and the little steamer tossed about in fine style, but I managed to preserve my equilibrium even better than the captain, who was intoxicated, and, on the whole, enjoyed the new experience very much. Macgregor, of "Rob Roy" fame, was on board, and we met him next morning (Sunday) reading the Bible aloud to himself on the beach. The harbour was full of Prussian vessels, and there was much rejoicing at the news of Napoleon's surrender at Sedan. Mr. Sanford was a most agreeable travelling companion. He always arranged the route to the best advantage, and made the most of what came in our way that was interesting and worth a visit.

The following year we went to the Channel Islands (he had a particular fancy for islands), and my brother Arthur went with us. We were taken for father and sons, and the delusion was kept up all through, much to the amusement of us all. I have in my possession a useful and ingenious work called "The Lovers' Letter Writer, for Ladies and Gentlemen," with the following inscription on the cover: "To Master Herbert New, first prize for good behaviour during his stay in Church Stretton in September, 1873, from his affectionate and dutiful father, J.L.S."

When "Spelling Bees" were all the rage I took part in a public one in Evesham, and succeeded in carrying off a prize in the shape of Nuttall's Dictionary, but I was run very close by our

butcher-boy, who came only second on the list, and as I flattered myself the book would do him more good than myself, I magnanimously gave it up to him. We figured in a paragraph in the *Spectator* shortly afterwards, but no names were mentioned.

My father was Registrar of the County Court, and used to have his Judge to stay with him sometimes, the day before the Court was held In those days it was Mr. Rupert Kettle (now Sir Rupert). I have a very pleasant recollection of his visits, and the stories he entertained us with. He had a good deal of humour about him, and was something of a mimic besides. A stupid defendant was conducting his own case one day, and making a parade of cross-examining the plaintiff and putting questions which he could not answer. The judge let it go on for some time when at last he stopped them. "My good friend," he said, "there are three answers you may make to that question—'Yes,' 'No,' and 'I don't know,' and they are all equally immaterial." He was quite familiar with farming and garden operations, and his knowledge was turned to good account in cases of this kind that came before him.

I had the good fortune to spend a few years of my early life in London,—but I am fast getting beyond the limits of my boyhood and must draw to a close. Of notable persons in the literary world I may mention George Eliot and Robert Browning, who were pointed out to me at a Saturday concert in St. James' Hall, sitting next to each other. The novelist's face was grave and rather sad, and she wore a plain black bonnet of an old-fashioned kind. I heard old George Cruikshank deliver a short speech at a temperance meeting, in which he referred to the length of time he had been a total abstainer. Beyond his personal references his remarks were uninteresting to an outsider, but the case might have been different with an ardent supporter of the cause, which I was not.

Among lesser lights I used to see Miss Cobbe at Little Portland Street Chapel, in the days when Dr. Martineau occupied the pulpit. A short plump little woman—she looked the essence of good humour and kindliness.

It is said that Virgil was eleven years over the Æneid, and was so dissatisfied with it when finished that he wished to commit it to the flames. I feel very much like Virgil at this moment, and my misery increases with the prospect of seeing my "Reminiscences" appear in print. Not being an artist myself I have been unable to furnish any illustrations to my story, so my readers may exercise their imaginations to the fullest extent in giving form and colour to the incidents narrated.

THE GENESIS OF DESIGN.

By HERBERT W. WILLS, A.R.I.B.A.

A visit to any modern building locality produces a sense of dissatisfaction and want of pleasure which it is difficult to account for satisfactorily. It is proposed in this paper to inquire into the causes that render modern building so different from the architecture of former ages, which rarely fails both to satisfy the mind and please the eye.

Considering ancient architecture first, we are struck with the slow and gradual way in which it emerged from primitive rudeness and the long ages which it took to perfect the various ancient styles. The ancient architectural records of Egypt extend over two thousand years, during which period there is a gradual development of their art from the simplicity of the Pyramids to the elaborate temples at Dendereh and Philæ. Greek art covers a period of something like six centuries. The Hindû style has been carried down continuously to the present day, while Gothic has lasted for four hundred years and was simultaneously developed in England and Western Europe.

The Renaissance, on the other hand, has not lasted three hundred years as yet, and has been imperfectly and fitfully adopted in England, while on the Continent though more in vogue it is productive for the most part of a series of buildings of very dubious merit and chiefly remarkable for sameness and want of originality.

Another feature of ancient architecture which is very striking and strongly opposed to the practice of to-day is the length of time over which the building of their great monuments was spread. Most of the Cathedrals of Europe were only completed after a term of several centuries, and many are still unfinished. Each of the tombs of the ancient Pharoahs was the work of a whole generation, while

in more recent times St. Peter's took a century and a half to build, and St. Paul's is almost the only example of a building conceived and carried into execution by one man.

A very important fact to bear in mind in considering our own medieval architecture is the influence of the great Trades Guilds of the middle ages which produced a race of skilled artificers whose knowledge was gradually added to and handed down from generation to generation. A glance at some of the building contracts formerly written shows how much was left to the contractor, and when we compare these with the accurate specifications and ample details which it is necessary to have got out before a contract for any work of considerable complexity can be made, it conveys some idea of the changes which have taken place.

In medieval times architecture, though following the same general lines all over Europe was far more differently expressed in different localities than it is at present. Judging alone by modern buildings it would be usually difficult to say what country you happened to be in, while no one could confuse the campanile of Italy with its straight unbuttressed sides with our own northern towers. Each province of France had its own distinctive variety of architecture. Fifteenth century Gothic varies in every country in Europe, and almost every city in Italy betrays some local peculiarity in its monuments.

Rudeness of workmanship is another great characteristic of old work. The temples of Egypt for the most part are examples of very roughly built work, and the walls are seldom entirely at right angles or parallel with one another, and the Pyramids of Ghizeh are in this particular a notable exception to the great mass of the buildings which followed.

The Cyclopean walls at Mycenæ and other places in Greece are very roughly cut, a large part of Roman work is extremely unfinished, the volutes of one of the upper orders in the Coliseum are even left uncut. Romanesque work is notoriously rough both in workmanship and detail. As an instance of faulty building the central piers of Peterborough Cathedral may be mentioned. They

were noticed to be failing a few years ago and it was found that the interior was filled in with broken rubble without any cementing material. Gothic architecture in many ways reveals instances of imperfect setting out, and the buildings of the best period of Greece are one of the few instances of a regularity like that displayed in work of to-day.

The ornament and sculpture however almost always display an originality and meaning seldom to be met with now. They are aptly described by Ruskin as "The expression of the mind of manhood by the hands of children."

Awkwardness of arrangement is very apparent in most old buildings, indeed in many cases rooms seem to be thrown together by chance. The accompanying plans of Berkeley Castle and of a modern house will serve to illustrate this point. In one of King Henry Third's palaces the chapel was reached by passing through the King's bedroom, which he found so inconvenient that he had an external staircase built to give access to it. It is hardly an exaggeration to say that an artisan's dwelling of to-day is more comfortable and convenient than many of the great halls of a few centuries back.

The thick and massive walls and heavy roofs of former ages influence the appearance of old buildings very much, but they were in many cases only the outcome of a necessity for security in former times, and it is of comparatively recent years that the most economical and effective way of framing roofs and other structures have been known and much used. Now we have to consider in many cases what is the least amount of material which can be well used and the best way in which it is to be disposed of, and the result is in most cases that the deep reveals and projections of ancient buildings, which contribute so largely to their appearance, have to be abandoned for a lighter and more scientific method of construction. The great cost of oak and the readiness with which the pine and deal of Northern Europe can be imported have very largely influenced some of our divergencies from the more solid work of former days. Some of the old towns in Holland give a

very good idea of the course which building might have taken in our own country had we not had natural resources in the abundance which we have, and the far more sparing use of materials there than in England will lead most people to give the preference to the appearance of our own more solidly built structures. The frequent, and in fact in some localities constant, use of timber and plaster as the main building materials contributes very much to the effectiveness of some of our old towns, but the great danger of fire has led to the almost complete abandonment of half timber buildings in modern times.

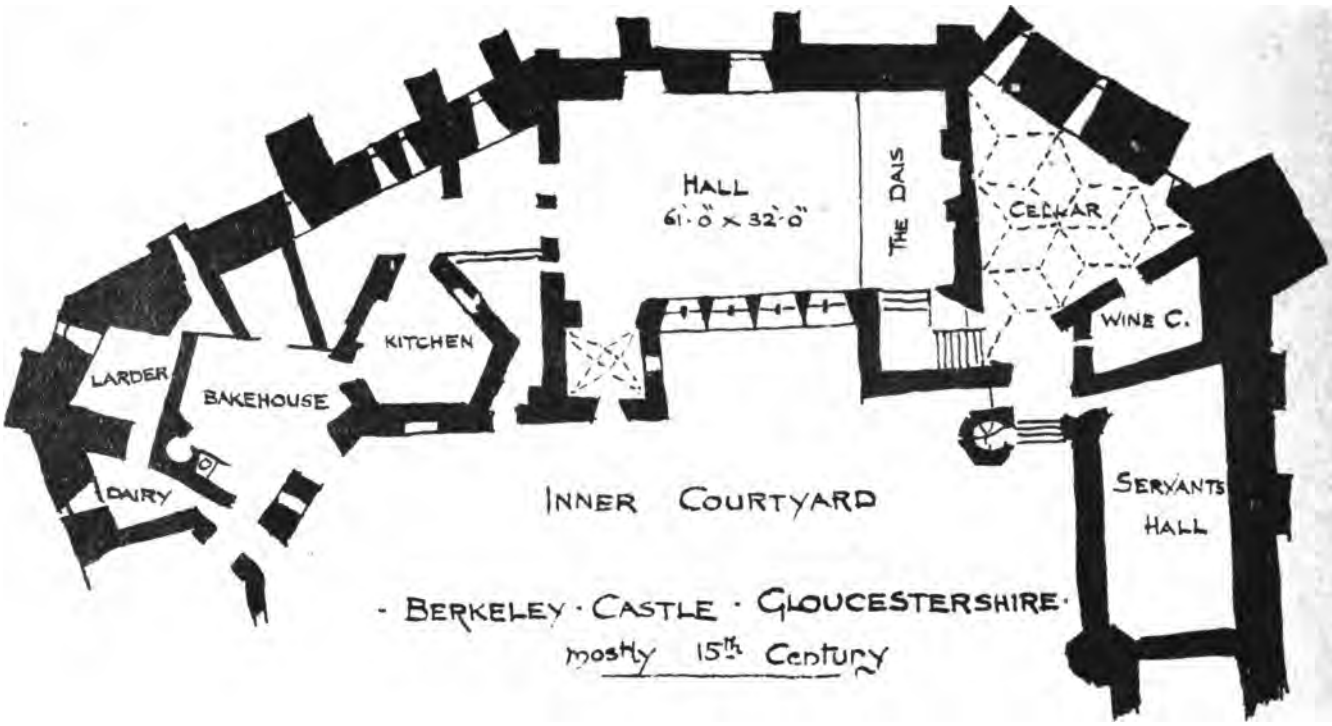
The influence of the powerful religious bodies all over the world, and the amount of respect and position they have occupied, have had an effect on former architecture which can hardly be overestimated. It would be difficult to say how many great abbeys and churches owe their origin to the superstition and credulity of people who on their death bed wished to purchase immunity from hell in a future existence. The buildings which have been erected for religious purposes all over the world are the finest and largest monuments which exist, and have very little counterpart in modern times in this country, where, owing to the number of religious bodies, there is no longer the necessity for such large churches, and where the Reformation has made many alterations in the nature of the requirements of the modern church.

The general effect of almost every limitation under which the old styles were developed has served to add impressiveness and force to them. The difficulty of manufacturing glass resulted in the use of the very small windows glazed with little squares of glass set in lead, which caught the light at different angles like the fascets of a jewel, and produced an effect so very much better than the dead black surface of a sheet of plate glass. The difficulty of supporting great sheets of leaded glass also brought about the extensive use of mullions and transomes in windows, which add so great a charm to our Elizabethan houses. The necessity of security in turbulent times produced the medieval castle with its groups of towers and circles of walls. Every cathedral contained a wealth of

imagery and symbolism illustrative of the Bible, and readable to those to whom written knowledge was unknown. The want of means of communication and means of carriage led to a more complete study of the way in which local materials could be utilised, which resulted in their being used with far more propriety than is often the case now. The steady practice in the use of one style led to a far better understanding of the method in which it should be used. The slow growth of population did not necessitate anything like the jerry building of to-day, and everything conduced to the orderly and steady development of architecture.

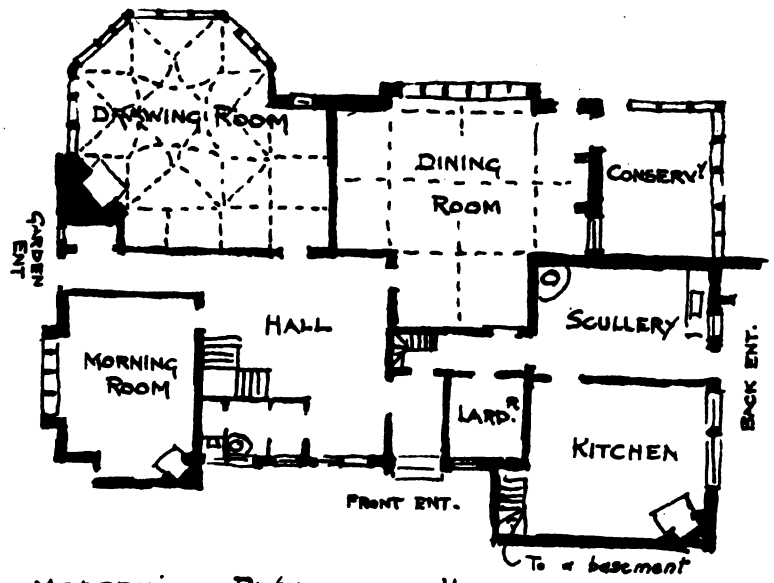
When we turn to the age of the Renaissance a change is at once apparent. The turn of thought towards the works and learning of Greece and Rome at an age when lived a great number of the most gifted men the world has ever seen, was productive of a series of buildings which were carried out all over Europe without much reference to local requirements or anything besides the desire to imitate as nearly as possible Roman architecture. This was productive of buildings everywhere, of which the interior was not expressed but, on the contrary, masked by the exterior. St. Paul's, with its suggested double story and range of false windows carried up in front of a gothic arrangement of Clerestory, is a notable instance of this. At Audley Inn a sham porch is added at one side of the front to balance the real entrance, and in the Chapel Royal, Whitehall, built by Inigo Jones, we have a large hall treated externally as if it were a two-storied building. The impulse given to this system of building by the great Italian architects who inaugurated it has only in the course of the last century begun to wear itself out.

One very remarkable feature of the Renaissance is the great number of painters who were architects as well, and to a great extent its vices have descended from this—a very remarkable instance of the inability of men to thoroughly master several things at a time. The heavy horizontal cornice and free standing pillars of this style have proved very inapplicable to northern buildings when carried out in a strictly classical manner, while the



- BERKELEY · CASTLE · GLOUCESTERSHIRE ·

mostly 15th Century



- A MODERN - RIVERSIDE - HOUSE -

Messrs J & J. Belcher Archts

H.W.W. delt.

fineness of detail renders it very ineffective in many situations where the bolder and more readily seen gothic is of far more value. The way in which a modified classic style may be altered to suit the requirements of a northern climate is very happily shown in some of our great Elizabethan and Jacobean halls and in some of the buildings of the François I. style in France; but pure Renaissance architecture, on account of its unbending nature, seems unfitted for use in this country.

In the present day we are crippled in so many ways by the enormous influx of knowledge of past styles, and by the great number of new requirements which are constantly being added to the number of things which have to be considered in building.

The knowledge of past styles has resulted in the revival of one after another of them for a period of years during which time they have been carried out, aided by popular taste, in a way which gives little or no satisfaction when the furore for them has died away. The British Museum and General Post Office in London, and many buildings in almost every town in England, are the instances of a revival of Greek architecture, carefully and tastefully carried out; but although their forms are in many cases pleasing and graceful they entirely fail to satisfy any but the casual observer. The beautiful pediment and voluted caps of the British Museum are blackened with soot, the columns standing all round the front of the building only serve to darken the rooms behind, while their flutings are seldom pencilled out in our climate by bright sunshine. The result is very different from that produced in the bright atmosphere of Greece or Ionia, and at the same time the interior arrangement and purposes of the building are largely compromised.

The same can be said of many a Gothic building put up during the period when no building which had not a thirteenth century mask on would receive favourable consideration from the public.

The Queen Anne phase which has found such favour of recent years has more to recommend it from a practical standpoint than the former revivals, as it admits of almost any kind of window being used without impairing the style, but as architecture its best

claims to recognition are of a rather negative nature. A great deal of very pretty work has been done in it, but it is difficult to imagine a really great building in a style the chief features of which are a quaint arrangement of sash bars and picturesque gables. The mouldings and ornament too are of a far more strict and often less pleasing character than we find in Elizabethan or the early semi-Renaissance architecture.

The greatest successes of modern building are its domestic work, and it is hard to find fault with the best work of the foremost architects in this respect.

Anyone wishing to build has now such a number of examples before him of modern work—some good and many bad—that if his taste has not been cultivated and is not naturally good he is as likely to prefer the worse, and so the bulk of indifferent work seems likely to be very large as far as can be seen. Formerly there was but one way of building—that which had been continuously developing for centuries—and there was hardly any choice between good and bad, which must have had an enormous influence on the work of our forefathers.

The way in which almost from day to day new materials and methods are being brought out handicaps design very much. Plate glass and iron are of quite recent date and have been already extensively adopted for building purposes. Fibrous plaster, wood block flooring, cements, and hundreds of other materials, and new methods of using materials, are being invented almost daily.

We have not yet mastered the use of either of the two first mentioned materials. As the heavy stone lintel gave way to the arch so the latter in its turn is being ousted by iron beams, much to the detriment of architectural effect. A theatre is an interesting example of the difficulty of treating iron work. The result of using iron columns and girders is that we have an appearance of tier after tier of heavy galleries supported on what appears to be utterly inadequate to sustain the load, and no decoration can make the appearance of such interior satisfactory. The modern shop front, too, gives a whole front the appearance of being supported

on nothing. Almost the only satisfactory way of treating a shop being to arch over the front, which tradesmen not unnaturally object to, as reducing the area of window space. It does appear in these two cases to be almost impossible to design satisfactorily, though the future may reveal methods of treatment before which our difficulties will vanish.

Buildings with many stories are also very difficult to treat—artisans' dwellings, blocks of offices, and structures containing a number of rooms devoted to the same purpose. Requirements of light and air make it necessary that the window sills should not be high up from the floor and that window heads should almost touch the ceilings, and that windows should be of much the same size, all of which go to make an artistic design extremely difficult. The roof of such a building may not come down over two stories, because it means a sacrifice of space which leads to the roof being out of proportion to a very high building. The enactments made by Parliament for purposes of preventing fire, parapet walls, the cutting down of projections at the eves of buildings, enactments against projections over the streets, and the recessing of woodwork behind the face of walls, the abolition of half timber work, are all great drawbacks to the chances of making effective fronts in our towns.

Another feature which acts very disastrously on modern design is the cutting down of prices of buildings, owing partly to necessity and partly to the difficulty of making large profits from the rents of buildings run up for speculative purposes. The work of the jerry builder indeed (which is one of the products of comparatively recent times) is as bad as it could possibly be—the result of an ignorant and imperfect copying of features and ornament by men who are entirely guiltless of taste or knowledge.

The want of workmen trained in anyway in art also makes itself very strongly felt, as it throws an immense amount of work on the architect of to-day, which was probably done in most cases very largely by the master-workman of former times.

The planning of modern buildings, on the other hand, shows

an enormous increase, both of knowledge and skill. Our hospitals public buildings, and houses are arranged in a way which has never been equalled at any former time, and if we take Mr. Ruskin's definition—"That we require from buildings as from men two kinds of goodness: First, the doing their practical duty well; then that they be graceful and pleasing in doing it"—we must admit that in the first particular we approach nearer an ideal state now than in any former age.

It will be admitted that architecture even under the disadvantages under which it labours is making distinct advances. The Houses of Parliament, with their tame and monotonous repetition of detail, are distinctly behind the Royal Courts of Justice, much of the detail and general conception of which is very fine; and the Imperial Institute will, I think, show in many ways a further advance both in general conception and convenience of plan on previous work.

There seems to be every hope that in the future we shall not fall into the errors of the past and without understanding blindly follow ancient styles, but that we may, welding features into one harmonious whole, expressing the purpose of each building by its exterior, make the architecture of the future what that of the past has been, "a thing of beauty" and "a joy for ever."

MISSING LINKS.

By A. MILNES MARSHALL, M.A., M.D., D.Sc., F.R.S.;

Beyer Professor of Zoology in Owens' College; late Fellow of St. John's College, Cambridge.

There are certain things we are apt to assume we know all about, though we have never given a moment's serious attention to them, or taken the least trouble to enquire into their real nature.

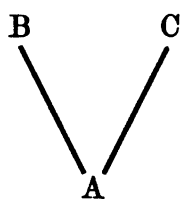
The rising and setting of the sun, the falling of a stone, the beating of the heart, are examples that occur at once. They go on with absolute certainty, without effort on our part, and to the majority of mankind it is enough that this should be so. Unusual events, an earthquake, a great famine, or a phenomenal success or failure of any kind, arrest our attention, excite our curiosity and lead us to enquire into their nature and causation; while events of everyday occurrence, things that everybody knows all about, fail to attract notice and are liable to be overlooked and neglected simply because of the monotonous regularity with which they happen.

And yet it is to a proper knowledge and appreciation of these commonplace everyday facts that we owe our knowledge of the solar system, of the laws of gravitation, and of the principles of physiology; and such examples may well serve to warn us of the danger of assuming that because facts are familiar they are therefore understood and have nothing further to teach us.

"Missing Links," the subject of my paper, may fairly be ranked among these neglected subjects. The phrase owes its origin,

at any rate in its present acceptation, to the Darwinian theory, and is chiefly familiar to us through that aspect of the theory which more immediately concerns ourselves, and which is popularly known as "The Monkey Question." It will be well, therefore, at the outset to recal briefly the leading principles of this theory.

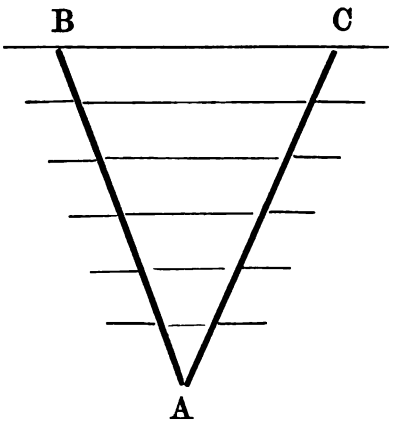
Take two animals of the same kind, say two men, or two pigeons, or two butterflies, and call them for the sake of distinctness B and C. Then what the Darwinian theory, or theory of evolution, says is that between B and C there is a blood relationship, a kind of cousinship of greater or less closeness: that, if you could follow back their family histories or pedigrees sufficiently far, you would find that they are descended from some common ancestor, whom we may call A. That just as among men Smith and Jones, though perhaps unaware of each other's existence, can trace back their pedigrees to the same Norman ancestor; so also are any two pigeons or butterflies or starfish related to each other in similar fashion. We may express this relationship conveniently by a diagram, thus:—



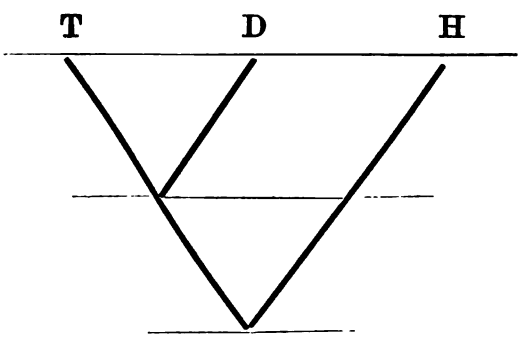
The simplest case is that in which B and C are two brothers, or two butterflies or other animals of the same brood, and A their parent. It is at once clear that the diagram represents correctly the mutual relationship of the three forms, A, B, and C; and it is also clear that A is in this case the real link or bond of union between B and C.

The conditions become more complicated when the relationship between B and C is a more remote one, and we have to trace back their pedigree through several generations before we meet with a common ancestor in whom the two lines of descent meet. We may

express this on our diagram by ruling across it a series of horizontal lines to represent the successive generations, thus:—



from which we see that while A still forms the essential link between B and C there are in addition a number of intermediate links at intervals along each of the lines A B and A C. Or, to take a further illustration, suppose you have three young friends, Tom, Dick, and Harry, and you want to indicate in diagrammatic manner that Tom and Dick are brothers and Harry their first cousin. You may do so at once by a figure of this kind, in which the horizontal lines represent successive generations.



Go back one generation, and Tom and Dick's lines meet, for they are sons of one father. Before Harry's line joins in it is necessary

however to go back one generation further, *i.e.*, to the grandfather of our young friends, who was one and the same person for all three and forms the true link or bond of union between them.

The argument is equally good, however many intermediate steps or generations there may be. B and C are not necessarily brothers and cousins, but may be any two men living anywhere; between them there is a bond of union, a blood relationship, which is due to their descent from some common and more or less remote ancestor, and this relationship may be conveniently expressed by a diagram such as is given above.

If this is true for any two men, then it must also be true for all men: that is to say, the whole human family may be represented as a tree, starting with a single stem—the Adam of our creed—and spreading upwards branching out into the various races of mankind, each branch again ramifying more and more minutely to indicate the families and ultimately the individuals of each race. Imagine this tree divided, like our diagram above, by a series of horizontal planes one above another, and let the intervals between these planes represent successive generations, or successive periods of any length we choose to determine, *e.g.*, centuries, then the branches of our tree intersected by any one plane will represent the people of that particular generation or period.

This kinship between all men of all ages has long been admitted, and forms part of the creed of most if not all nations. The Darwinian theory adopts these principles, universally accepted as applying to man, and extends them so as to include all the lower animals as well. It says that as with men so is it also with pigeons. Between any two pigeons, and therefore between all pigeons, there is a bond of union, a kinship, which is due to descent from a common ancestor, and which is best expressed by a pedigree constructed after the same fashion as those we draw up to show our own relationships. It says also that the same applies to any two butterflies, and therefore to all butterflies; to all starfish, to all jelly fish, to all animals in fact of every kind.

Further than this, it says that the same laws that apply

to individuals and groups of individuals hold good also in the case of larger assemblages; it says, in fact, that not merely are all pigeons descended from some common ancestor, and similarly with all butterflies and all jelly fish, but that all the various groups of animals—birds, butterflies, jelly fish, etc.,—are similarly bound one to another by bonds of relationship, due to descent from some ancestral form common to all groups alike.

We now see more clearly what these links really are that we are in search of. They are the connecting bonds between one animal and another, or between one group of animals and another group; and they are really, as we have just seen, ancestral stages, more or less remote, in the past pedigrees of these animals or groups.

If the forms we are concerned with, B and C, are closely similar to each other—*e.g.*, a couple of pigeons—then there will be comparatively few links necessary to complete the chain connecting them. Should they, on the other hand, be widely different as *e.g.*, a pigeon and a butterfly, then the connecting chain will be a long and tortuous one, and the links very numerous.

Having thus cleared the ground a little it will be well before proceeding further to take a particular case and consider it in some detail, in order that we may gain a more distinct and definite notion of what these links really are to be like, otherwise we might possibly come across them and fail to recognise them.

No better example could be found than that afforded by the various breeds of domestic pigeons, concerning which, thanks mainly to Mr. Darwin's careful and long continued observations, our knowledge is very complete and accurate.

Of domestic pigeons more than a hundred and fifty kinds are known, which breed truly, *i.e.*, transmit their distinguishing characteristics from one generation to another. The extreme forms differ very greatly from one another, as the following brief description of a few of the best known pigeons will show.

The Pouter is a large bird, with long body and legs, an upright carriage, and an enormous crop, which it has the habit of

inflating with air to an extraordinary extent. It glories in so doing, and nothing pleases it more than when the pigeon fancier, putting the bird's beak in his mouth, "blows him up like a balloon, and the bird then puffed up with wind and pride struts about retaining his magnificent size as long as he can."

The Carrier is also a large bird, but very different to the Pouter: the wings and feet are large; the beak is enormously long; and the skin round the eye, the nostrils, and the lower jaw is much swollen, forming the wattle.

The Barb is another large bird, with a short broad beak, and with a well developed wattle round the eye.

The Fantail is smaller, with a short body and beak, and with the large tail feathers, which in other forms are twelve in number, increased up to thirty-six, or even in extreme cases forty-two, and capable of being erected and spread out above the back like a fan. The feet are small, the mode of walking is peculiar, and the birds have a curious habit of trembling.

The Turbit has a short beak, and is distinguished by the feathers of the front of the neck being arranged in a divergent manner like a frill.

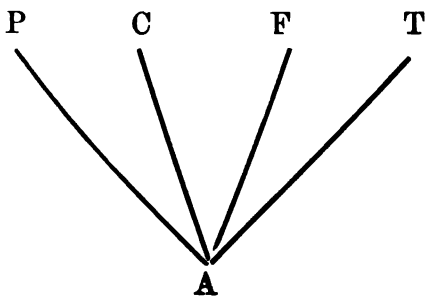
The Tumbler is a very small bird with an almost ridiculously small beak, and derives its name from its habit of turning back somersaults in the air, which it does quite involuntarily and sometimes to its own harm.

The Jacobin, in which the feathers of the neck form a hood, almost enclosing the head; and the Trumpeter, which is distinguished by a tuft of feathers curling forwards over the base of the beak, by the large size of the feathers on the feet, and by its peculiar voice, quite unlike that of other pigeons, may also be mentioned.

These are only a few of the best marked breeds of domestic pigeons. They differ enormously from one another, not merely in size, and shape, and colours, and habits, but also in points of internal structure, such as the shape of the skull and other parts of the skeleton, the size of the crop, etc. Notwithstanding these

differences, which are perfectly constant, and the importance of which it would be difficult to exaggerate, we now know, through Mr. Darwin's researches, that all the domestic pigeons are descended from one parent form, the common Rock Pigeon, *Columba livia*; and that the characteristic differences between the several breeds have been gradually evolved by carefully selecting for breeding purposes those birds which in each generation showed in the most marked manner the special characters which it was desired to preserve and accentuate. Thus the short beak of the Tumbler has resulted from pigeon fanciers constantly and persistently breeding from those birds which in each generation had the shortest beaks.

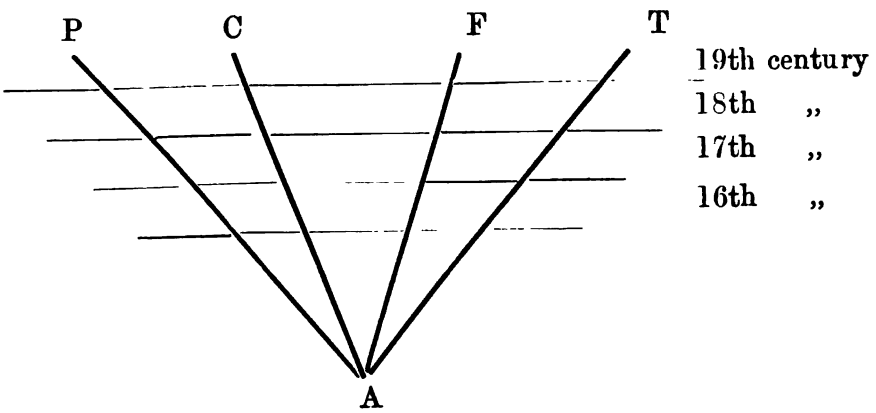
We may express the relationships between the several breeds of pigeons and the parent form by a slight modification of the diagram we have already employed. For the sake of simplicity let us confine our attention to four only of the breeds—the Pouter (P), the Carrier (C), the Fantail (F), and the Tumbler (T); then if we let A as before represent the common ancestor, in this case the Rock Pigeon, the following figure expresses the mutual relationships of the five birds:—



The diagram shows that Pouter, Carrier, Fantail, and Tumbler all alike are descended from the Rock Pigeon, which therefore forms the true ink connecting any two of these together. It shows also that the lines of descent diverge from one another: *i.e.*, that the differences between the several forms increase steadily with time. Or we may regard the same fact from the opposite point of view,

and note that as we pass back from the present time to earlier and earlier generations the lines converge and approximate towards one another, which means that in former times the differences between the several breeds were less pronounced than they are now.

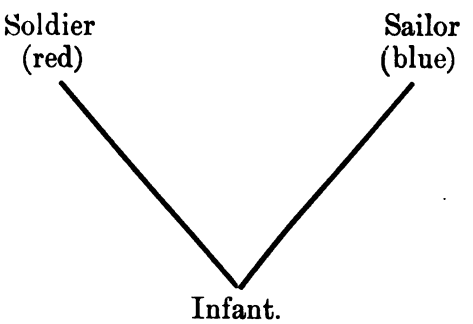
This is a statement the accuracy of which can be at once tested. Suppose we rule horizontal lines across our diagram, and agree as before that the intervals between successive lines shall correspond to periods of a hundred years each. Thus—



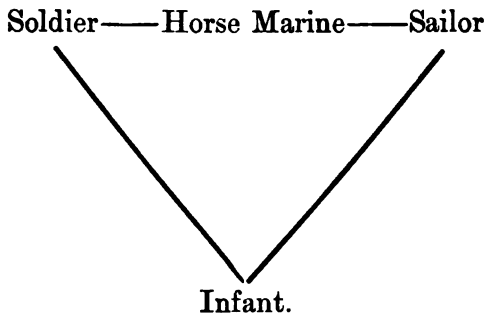
Our figure shows that in the 17th century, for instance, the differences between our four breeds should have been much less than at present. Fortunately we know a good deal concerning the condition of the several breeds of pigeons at the commencement of the 17th century from the careful descriptions of Aldrovandi and others, from which it appears that at that time there were "the Jacobin, with a less perfect hood; the Turbit, apparently without its frill; the Pouter, with shorter legs, and in every way less remarkable; the Fantail, with fewer feathers in its tail; the Tumbler, but no short-faced ones; and the Carrier, with both beak and wattle incomparably less developed than in our English Carriers." "In short the several breeds had at this early period not diverged in so great a degree as now from their aboriginal common parent, the wild rock-pigeon."

In each of the cases we have considered hitherto, the link did not lie in the direct line between the two forms to be connected, but was found by tracing back their pedigrees until they met at some point, near or remote. Thus the link between a Pouter and a Carrier does not lie anywhere along a straight line joining P and C in our diagram, but is found by following back the lines of descent of the Pouter and Carrier until they meet at A in the Rock Pigeon. This is an exceedingly important point, and deserves further notice. A straight line is the shortest distance between two points, and in searching for a connecting link between the two we are very apt, and not unnaturally, to look for it along this line. Yet a single example will show how mistaken this would be.

We have all when children taken delight in drawing soldiers and sailors, and I am probably not wrong in assuming that we all when so doing manifested an instinctive and inherited tendency to paint the soldier red and the sailor blue. Now where is the link between our red soldier and our blue sailor? Is it a man red on one side and blue on the other; or is it a personage of a uniform purple colour? Neither of these will do; the true link does not lie anywhere in the direct line between soldier and sailor, but is obtained by striking out the distinguishing features of both soldier and sailor, red and blue alike, and going back to the period of undifferentiated boyhood, or the still more colourless condition of infancy, where we have neither soldier nor sailor; the actuality of neither, but the possibility of both.

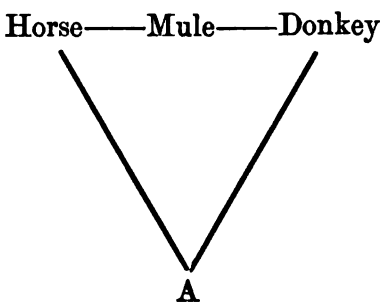


The point we are considering may be further emphasized by the actual occurrence of intermediate forms midway between our two terms, but which clearly are not of the nature of true links. Thus midway between the soldier and the sailor, partaking in equal measure of the characters of both, comes the horse-marine, or his modern equivalent, a Jack-tar on a camel, who though intermediate in position and character is manifestly not a real link between the



two, but a later production that could only have arisen after both soldiers and sailors were established.

To show that this is not all nonsense let us take another example which forms a precisely parallel case. The horse and the donkey are closely allied animals. Midway between them comes the mule, which shares the characters of both its parents but is clearly no true link, but an artificial unnatural creation, a



horse-marine in fact, that could not possibly have existed prior to either horse or ass. The real link A must be sought elsewhere, and in this case is to be found among animals now extinct and known to us only by their fossil remains.

So far in all the cases we have considered, whether pigeons, donkeys or men, the links were devoid of the special characters of the forms they served to connect. The link between soldier and sailor was neither red nor blue, and that connecting the Fantail and Tumbler had not a fantail and did not tumble.

Links are not all of this kind. Sometimes they combine the characters of both the forms they connect, and an excellent illustration of this is afforded by the course of the aorta, the great artery which carries blood from the heart to the body, in birds and in mammals respectively.

In a bird the aorta, arising from the heart, bends over to the right side and then runs back along the body towards the tail, lying close beneath the vertebral column or backbone.

In a mammal the aorta, arising in similar fashion from the heart, bends over to the left side of the body and then runs back. The link here is afforded by the condition of the blood-vessel in a reptile or in a frog in which both aortic arches are present, one on the right side and one on the left; of which the bird has preserved the right arch and lost the left, while the mammal has kept the left and lost the right.

Yet another kind of link exists, and this perhaps the least likely to be suspected. Sometimes we find two animals specially characterised by *not* possessing certain structures usually present in the group to which they belong, and the link connecting the two may be possessed of these structures.

Thus insects, as a rule, have wings; a considerable number, however, are wingless, and these may be divided into two very distinct groups; firstly, those insects which have never had wings, and whose ancestors never had wings; and secondly, insects which have lost the wings they themselves or their ancestors formerly possessed. The link between the insect which never had wings,

and the insect which had wings but has lost them is afforded by one of the ordinary insects which has wings and keeps them.

Finally, links may be directly intermediate between the forms they connect. Thus whales are mammals in which the hind limbs have disappeared; and in snakes the fore limbs have gone as well. The links as regards limbs between whales and other mammals, and between snakes and lizards, will be directly intermediate forms in which the limbs become from disuse gradually smaller and smaller and ultimately are lost completely.

Having thus seen of what nature links may be, and what their essential characters are, let us briefly review the evidence we have as to their existence and modes of occurrence.

The evidence may be considered under four heads:—Historical, Anatomical, Embryological, and Palæontological, which we may deal with successively.

1. *Historical Evidence.*—By this we mean documentary evidence, showing that modification of one form into another, through a continuously intermediate series of links, has been effected during historic times.

Under this head comes, for instance, the evidence we have already set forth concerning the breeding of pigeons; evidence which shows us that very considerable modifications have been effected in the characters of the leading breeds of domestic pigeons within the last three centuries.

Similar arguments apply to other domestic animals. We know that within historic times very great changes have been effected by man in the shape, size and other characteristics of the various breeds of poultry, horses, dogs, sheep, pigs, cattle, etc.; and modifications of at least equal extent in our flowering plants and fruit trees: and in these cases we have actual documentary evidence of the existence and characteristics of the intermediate forms or links.

It is worthy of notice also that in many of these cases this is the sole evidence we have of these links. We cannot point to any collection of bones or other remains of the pigeons that formed the

links between the Blue Rock and the Pouter; neither have we any record of the numerous steps between our highly cultivated fruits and their wild progenitors, other than that afforded by the descriptions and figures of authors in past ages.

One of the most striking cases ever recorded of structural modification is that of the genus *Artemia*, and here again the evidence as to the intermediate or linking forms is wholly documentary.

Artemia is a genus of small crustaceans belonging to the group of Entomostraca, of which the little water flea (*Daphnia*) and fairy shrimp (*Cheirocephalus*) are well-known members. Of *Artemia* there are several species, two of which, occurring in salt water, are of special interest; one of these, *Artemia salina*, is found in water containing about four per cent. of salt, *i.e.*, rather more than is usually present in sea water, while the other species, *Artemia Mülhausenii*, occurs only in water containing as much as twenty-five per cent. of salt. The two species are of about the same size, three-quarters of an inch or so in length, and agree also in general form; they present, however, certain well-marked and constant differences. In *A. salina* the hindmost segment of the tail is deeply cleft at the end, and each of the lobes bears a large number of plumose setae or bristles; in *A. Mülhausenii*, on the other hand, the tail lobes instead of being long and conical are short and round and completely devoid of setae. In other respects also the two forms are strongly contrasted with each other, and no zoologist has hesitated to rank them as distinct species.

However, about a dozen years ago, a Russian naturalist, Schmankewitsch, found as the result of a series of careful experiments that the differences depend solely on the degree of salinity of the water in which the animals dwell. He found that by taking *Artemia salina* living in water having four per cent. of salt, and very gradually increasing the strength of the solution by adding salt, he was able in the course of several generations of *Artemia* to effect a gradual change to *A. Mülhausenii*. Similarly, by starting with the latter species and adding fresh water so as to decrease the

salinity the converse change was effected and all the *Artemiæ* were converted into perfectly typical *A. salina.*

The experiment has been performed by nature herself. In the neighbourhood of the Black Sea were two lakes at slightly different levels, and separated from each other by a dam. The upper and larger lake contained water having four per cent. of salt in which *Artemia salina* was living in large numbers. The lower and smaller lake was of a much higher degree of salinity, containing about twenty-five per cent. of salt, and had no *Artemia* at all.

Through some accident the dam separating the two lakes gave way, and the water from the upper lake poured down into the lower one, increasing its size very greatly, and diminishing its salinity to about eight per cent. Large numbers of *Artemia salina* were swept down into the lower lake by the flood, and although some died yet a considerable number established themselves in it and bred freely. The dam was repaired, and the water in the lower lake began slowly to evaporate, and consequently to gain in strength of salinity until in about three years it had become reduced to its original size, and its percentage of salt was once more twenty-five. Specimens of the *Artemia* were fished out at intervals, and it was found that as the strength of the solution gradually rose the tail lobes of the *Artemiæ* became shorter and rounder, and the bristles fewer in number, and at the end of the three years all the *Artemiæ* had become perfectly typical examples of *Artemia Mülhausenii*, not merely as regards the tail lobes and setæ, but in all other respects as well.

2. *Anatomical Evidence.*—The question for us here is, are there animals now living which in point of structure serve as links connecting together other animals and groups of animals? In a certain sense every known animal is a link of this kind; for almost any form if blotted out of existence would leave a gap, would widen the interval between some other animals or groups of animals: while nothing is more characteristic of the zoology of the present day than the manner in which new discoveries are tending to break down the old established lines of separation between one group and

another, and to show that these sharp and arbitrary boundary lines are things of our own creation and have no counterpart in nature. The genus *Peripatus*, consisting of odd little caterpillar-like animals, found at the Cape of Good Hope, in New Zealand, South America, the West Indies and elsewhere, is an example, as it serves to link together the two groups of worms and insects in a remarkable fashion. Another worm-like animal, *Balanoglossus*, found in the Mediterranean and along the Atlantic shores of North America, is at present being banded about between vertebrates and invertebrates and seems in some ways to be a real link between these two great divisions of animals. The mud-fish of Australia, West Africa, and South America serve to link together air breathing and water breathing vertebrates, to connect fish with amphibians; and examples such as these could very readily be multiplied.

3. *Embryological Evidence.*—The study of the development of animals affords evidence of peculiar importance, and of a curiously instructive nature.

Soles, plaice, turbot and other flat fish when not swimming rest on the sea bottom, lying on one side. The side of the body—right or left in different cases—on which they rest is usually white or very faintly coloured, while the opposite side, which is turned upwards and so exposed, is coloured so as to closely resemble the sea bottom and so enable the fish to escape the notice of their enemies. To render the resemblance more complete the coloured surface has the power of changing its tints, becoming sandy-coloured on a sandy bottom and mud coloured if on mud. In the adult flat fish, as anyone who passes a fishmonger's shop may see for himself, both the eyes are on the same side of the head, *i.e.*, on the coloured side. While the fish is very young, however, the eyes are in the usual position, one on each side of the head, and there is no difference in colour between the right and left sides of the body. It is only as the fish increases in size that it adopts the habit of lying on one side on the sea bottom, and the eye of this side being thus rendered useless gradually shifts over to the opposite side of the head. This can only be interpreted as meaning that flat fish are

descended from more ordinarily constituted fish, and that their peculiarities of colouring and position of the eye are due to their acquired habit of resting on one side. It is a good example of what is known as Recapitulation, *i.e.*, the tendency which all animals have in the course of their development from the egg to the adult condition to repeat or recapitulate the characters of their ancestors; to climb, as it were, up their own genealogical tree. The development of an animal thus becomes a condensed account or epitome of the past history of the species to which it belongs; and it follows that from a study of embryology we may gain important evidence as to the real affinities of an animal, and as to the bonds of union or links connecting it with other animals.

Thus, whalebone whales in early stages of their development possess teeth, which are never used, but are shed before birth; their presence, however, is evidence of a most cogent nature in favour of regarding whalebone whales as descended from toothed ancestors: for how else would it be possible to explain the constant presence of these perfectly useless structures in the young animal.

Again, an Ascidian or Sea Squirt is an animal whose relationship to a vertebrate would never be suspected for a moment from a study of the adult. In its early or larval condition, however, it is so closely similar to a tadpole in appearance and structure that there can be no hesitation as to its real affinities. Parasitic animals afford still more striking examples: in them legs, digestive organs, eyes, ears, brain itself may disappear in the adult, being of no use in the peculiar conditions of life under which they live. The true zoological position or relationship of such forms would be absolutely impossible to determine were it not for a knowledge of their earlier developmental stages.

The working out of their own pedigrees has always proved an attractive task to men. By a study of the development of animals we obtain, thanks to the law of recapitulation, aid of an invaluable character in our attempt to reconstruct the past histories, the pedigrees, not merely of single species but of whole groups of animals, and possibly in the end of the entire animal kingdom. It

is the help which it thus gives that constitutes the true fascination of embryology, and explains why it is attracting such extraordinary attention at the present time.

Palæontological Evidence.—The evidence afforded by fossils is, when we can obtain it, the most valuable of all: for these fossils are the remains—bones, teeth, scales, shells, and other parts—of the actual ancestors of the animals now living on the earth: that is, are the real "missing links" themselves, which connect the recent forms with their yet earlier ancestors.

As, by the theory of evolution, the animals we now see about us are the direct descendants of the animals, often very dissimilar, which lived in previous geologic ages; and as by the same theory the process of change from one to the other must have been in most cases an exceedingly slow and gradual one, it follows that there must have existed on the earth very considerable numbers of animals intermediate as regards structure between these more remote ancestors and their present representatives. Furthermore, in the case of large animals the intermediate forms were in all probability commensurate with them in size, and as they must have had bones, teeth and other hard parts that could readily be preserved as fossils, it seems only reasonable that we should be able, in some cases at any rate, to unearth these fossil remains and show that they do form gradational series linking the past with the present; or, if we are unable to do so, we ought to be able to offer some satisfactory explanation of our failure.

These are the problems with which the palæontologist is at present concerned, and these are the questions to which he is endeavouring to obtain answers.

In considering the problem we must first notice that it is only certain parts of certain animals that can in the ordinary course of events have any reasonable chance of being preserved as fossils. Soft-bodied animals, for instance, and the soft parts of all animals, can only be so preserved under exceptionally favourable circumstances. Furthermore there are only certain deposits, such as mud, that are capable of preserving these remains uninjured. Then, when one is

successfully buried in a suitable material, which can only occur under water, this matrix must be hardened, raised above the water level, and exposed at some place where its importance will be recognised by man, and the bones or other fossils extracted with sufficient care and in sufficient numbers.

So great are these difficulties that it can only very rarely happen that a complete series of fossil forms is preserved for us; and it is to this Imperfection of the Geological Record, as it is called, that we must turn for the explanation of our failures to produce such series. "The crust of the earth," to quote Mr. Darwin, "with its embedded remains, must not be looked at as a well-filled museum, but as a poor collection made at hazard and at rare intervals."

Still, although the imperfection of the record will undoubtedly explain most cases of failure, it is only reasonable to suppose that in certain instances the links should be preserved, and that we should be able to disinter them and determine whether or not they satisfy the conditions we have required of them. Fossils have been eagerly sought far and wide over the earth's surface; their importance is fully recognised, and it would indeed be strange were we unable to discover a single series such as we require, that would link together existing animals and their more remote progenitors.

Fortunately this is not the case: several such series are now known to us, and there is little doubt that with progress of time the list will be very largely added to.

Perhaps the most striking instance is that of the ancestors of the horse, which furnish so admirable an illustration of the real nature of missing links that we may well devote a few moments to them.

The typical number of fingers and toes in mammals, and indeed in all terrestrial vertebrates, is five, the number present in ourselves, in monkeys, elephants, bears, and many other forms. This number, however, is very frequently reduced: thus the pig and the hippopotamus have but four; the rhinoceros three, and the cow or sheep two. The horse, with the zebra and donkey, stand alone in having but a single one, corresponding to our own middle finger in

the hand, and middle toe in the foot. This single digit is of great size, forming in the fore-limb the whole of the leg from what we call the knee—really the wrist—to the hoof; and in the hind-limb the part from the hock or heel to the hoof. The horse thus walks on the extreme tips of its fingers or toes, and the hoofs really correspond to our own finger, or toe nails, very greatly increased in size.

As there are the most convincing reasons, which we need not consider here, for regarding five as the typical number of fingers and toes in mammals, it follows necessarily that horses must be descended directly or indirectly from five-fingered and five-toed ancestors, and it becomes a matter of the greatest interest to enquire whether the fossil remains of their ancestors confirm this statement or not.

Of these fossil ancestors a very large number of forms are now known to us, chiefly through the researches of the American palæontologists, and the evidence these give is as follows.

If we examine the horse's foot a little more closely we find on either side of the single large finger or toe a slender rod of bone, and these "splint bones," as they are called, are really the last disappearing remnants of the fore finger and ring finger in the hand, and the corresponding toes in the foot: for in the fossil remains of the immediate ancestors of horses we find these fingers and toes fully developed, though of small size. The genus *Hipparion*, for instance, had in each foot a single large digit like the horse, and on each side of this a small digit with the full number of joints, but too short to reach the ground. Going further back we find in *Mesohippus* these small digits becoming larger, so that they reached the ground; we find also a trace, in the form of a splint, of the little finger and little toe. Earlier still we find the genus *Orohippus* with four well developed digits in its foot; and in still older rocks, at the base of what are called the Tertiary deposits, is a genus *Eohippus*, in which, in addition to four digits of nearly equal size, a rudiment of the thumb is present as well. We therefore find that these fossil ancestors of the horse afford us a full and complete

series of "missing links," showing in a most perfect and convincing manner the gradual transition from the five-fingered condition seen in typical mammals to the highly specialised single-fingered state characteristic of the modern horse.

This is perhaps the most complete, the most impressive series of intermediate or linking forms which palæontologists have yet brought to light; but many other instances are known to us in which the fossil remains of animals that formerly lived on the earth, when we are able to collect them in sufficient quantity, do really form links serving either to narrow the gaps between recent groups of animals, or to connect recent forms with yet more remote ancestors.

We have now considered in somewhat summary fashion the true nature and significance of "missing links," and the evidence at our disposal as to their existence; and we have found that whether we were dealing with documentary, *i.e.*, historical evidence, or with that afforded by anatomy or embryology, or with that yielded by a study of fossils the result is the same. So far from there being any doubt as to the existence of such links we find that they really abound, failure to see them being due not to scantiness of evidence on their part, but to ignorance or misconception of their real nature.

Before concluding, it will be well to refer briefly to that aspect of the problem known familiarly as the monkey question. The Darwinian theory does most undoubtedly imply that there is a blood relationship between man and the lower animals; and it is also a most undoubted fact that of these animals, the anthropoid apes—the Orang, the Chimpanzee, and the Gorilla—are those which are most closely allied to man. Such being the case, much ingenuity has been exercised in the search for "missing links" which will bridge over the gap between man and monkey, and very bold statements have been based on the failure of these efforts.

Such ingenuity is however misdirected, and such efforts predestined to fail; for if what we have said above as to the real nature of links be true, it follows that the links between man

and monkey, whatever they may really be, will most certainly not be directly intermediate forms, any more than the link between soldier and sailor was a purple individual. From time to time the enterprise of local Barnums provides us with such alleged direct links. These, which are of course really nothing but horse-marines after all, are usually very dirty and disreputable-looking beings, which, in outward appearance, are not unlike dilapidated monkeys.

It is a source of very legitimate amusement to a Darwinian to note the extreme anxiety people always show to prove that these waifs are really monkeys and not men, and the readiness with which they are able to accomplish this to their own satisfaction. And yet in all cases they have proved to be really human beings after all. Thus of late years we have had a couple of idiot children spoken of as Aztecs, and a Siamese child called Krao, not to mention other minor celebrities, all of whom were pronounced positively to be monkeys on their first appearance. Indeed the only conclusion to be drawn from such cases appears to be how very easy it is to persuade people to believe that human beings are monkeys.

It is well not to prejudge a question simply because the conclusion is distasteful. Those who do so, those who refuse to examine the evidence and form their judgment on it rather than on preconceived ideas should remember that, in so acting, they are taking up a position precisely similar to that held not so very long ago by those who in like manner opposed the now universally accepted views concerning the shape of the earth and the movements of the planets round the sun.

"We are sometimes tempted," Sir Charles Lyell says—and there are few men with whose words I could more appropriately end—"we are sometimes tempted to ask whether the time will ever arrive when science shall have obtained such an ascendancy in the education of the millions that it will be possible to welcome new truths, instead of always looking upon them with fear and disquiet, and to hail every important victory gained over error, instead of resisting the discovery long after the evidence in its favour is conclusive."

UNDERGRADUATE LIFE AT OXFORD.

By WILLIAM LLEWELYN HERFORD,

Of Keble College.

"When I was an undergraduate at Oxford," were the words with which Mr. Matthew Arnold began his, to Bostonians, famous lecture on Emerson, delivered in the year 1884, and anyone hearing the opening sentences of that lecture could not but have been impressed by the influence, strong and lasting, which the lecturer's undergraduate life had undoubtedly had upon him. Never to be forgotten are the stirring words, chosen each of them with that exquisite appreciation of force and fitness which the great critic had to such a marked degree. The University of Oxford had in his day at any rate one junior member whose heart readily responded to those voices which gave expression to that clearer, higher life of man after which he was but dimly groping. There was the thrilling voice of Carlyle speaking out with that unique and rugged force of his against the littleness and shams which all true men hate—and hate most when reading Carlyle. Then very touching was the reference to the deep earnestness and scholarly refinement of Newman, whose simple saintliness none could resist: whom we all love, though with some of us the love is tinged with regret. Also, lastly, there was that voice coming from the great new world, the voice of one whom the lecturer described as 'a help to those who would live in the spirit,'—the voice of Emerson.

These voices have not died away, but are now listened to with that eager intensity which will ever be commanded by the living and the present. Other voices and other influences are having their day, but it is the same old Oxford that sees them all come in and pass away, sitting there like a great impassive serious Sphinx,

so close to the life in and around her, and so immediately connected with it, and yet so entirely, in a sense, altogether apart from it.

He was a wise man who said of Oxford 'to have loved it is a liberal education,' and it is a saying to which the most commonplace undergraduate who squeezes through his examinations with as little trouble to himself as possible, will find some response. The very name 'Oxford' has a mysterious spell for the mind of the soon-to-be undergraduate. It conjures up infinite and most wonderful possibilities and half-defined pictures of the life there, gathered from the stories of friends and various books. The time lags heavily till the long-wished-for October arrives when, for him, this 'liberal education' is to begin. Like all other times, the day comes at last, and the hopeful freshman, filled in equal proportions with the proud consciousness that he is going to Oxford and with the desire to conceal the fact that he has never been there before, finds himself deposited at the station with crowds of other men (all of whom *look* much more at their ease than he *feels*), the said crowds of men forming hopeless yet expectant groups around mountains of portmanteaux and boxes; and—oh! ye Oxford stationmasters, why is it ever thus on the first day of term?—a most trying dearth of porters. At last our friend feels himself again as he whirls along to his college in one of those efficient Oxford hansoms. The college is reached; the ever equable and polite porter is martialling the luggage to the various rooms. Our modest freshman gives his name and is conducted to the new quarters allotted to him. Here again his feelings are very mixed: is he proud of being master of a sitting-room and a bedroom all his own, or is he depressed at the novelty of his position, and does he feel that if he were to fall down dead on his portmanteau that moment no one would care one bit? However, before he has time to make up his mind on this point, the great clanging Hall bell rings for dinner, and he remembers that he is hungry. The first dinner in Hall is of course an event of note: every "first" anything is an event of note to an Oxford freshman. To begin with, the interesting dress called "academical" or "cap and gown," has to be assumed for the first time, in which,

striving to look natural, our friend joins the men of his year and sits with them at the lower end of the bright and fragrant refectory. There in the middle of the "high table" (N.B. only higher by six inches than the rest of the Hall) sits the college head, be he Warden, Provost, Principal, Dean, Rector, President or Master, and arranged around him sit his fellows in authority, the other dons. The dinner proceeds; the time has not come, as no doubt it will in his third or fourth year, for our friend to call up the steward and administer a severe reprimand as to the shortcomings of the victuals, so he eats his dinner thankfully and thinks, as is indeed the case, that it is all very good. In nearly all colleges the men have breakfast and luncheon in their own rooms and only dine in hall; he, however, who courts not too much of his own society has his breakfast carried across bodily to a friend's room where they discuss each his own individual breakfast but neither quite alone. "Wines," for which Oxford was once so celebrated, are of much less frequent occurrence. The "good" (?) old days when scarcely any but noblemen's sons and country gentlemen came to the university have now happily passed away. "Wines" are, however, given to a more sober tune than formerly, though one does occasionally hear of the homeward-bound undergraduate patiently and lovingly embracing a good stout lamp-post in view of his college gate, and "waiting for the college to come round." But, to be serious, there is undoubtedly less drinking in Oxford, as elsewhere, than there was twenty or thirty years ago, at which time such a poor sort of thing as a temperance society would have been tabooed, while now so much has the tone changed that the present writer has been at a temperance meeting in a college hall where more than a hundred undergraduates formed an enthusiastic audience.

'Work before play' is the order of the day at Oxford—as we know it should be everywhere and always, but *facilis descensus*,—so before taking the reader down to the river, he must be forced to face the dreary subjects of lectures, examinations, etc. It is not to be expected of anybody to understand the Oxford system of examin-

ation until he or (as we may now add) *she* has been through the mill. "When are you in for Schools?" is a question often asked with easy carelessness, and not unfrequently answered with a heaving heart weighed down with the depressing sense of woful unpreparedness. Whence this expression 'in for Schools?' Well, it must date from the time, not long gone by, when all University examinations were held in the Bodleian building, which from the headings over the various doorways, was known as 'the Schools.' In these buildings, precious to the world, no light is ever allowed; and sometimes in the winter months the usual tortures of examinations were aggravated by the writing against time on a rapidly closing in afternoon, with numerous wraps about one to act as poor substitutes for fires. But now Oxford rejoices in, or as Mr. Ruskin would have it, spurns the sight of, new buildings for examination purposes. But the old name adheres, and the new schools is where Alma Mater now forces her often unwilling and trembling children to sit (though now the rooms are large and well warmed and lighted) and put down all their knowledge on a not unfrequently startlingly small area of paper.

The first ordeal is Responsions or—as no term in constant use can long go undistorted in Oxford—'Smalls,' which can now be passed before coming into residence. Three terms later—i.e. in the following June—Moderations, or 'Mods.,' is taken; pass Moderations this, which men generally take who wish to graduate in the minimum three years. Honour Moderations is a much harder classical examination, and men who aspire to good masterships will invariably try for a good class in this. After 'Mods.' the question is whether a 'pass' or a 'class' degree is to be faced. The former is naturally the easier, and is generally selected by those men to whom the degree is in itself a secondary consideration; the primary one the making of friends and the having of a good time.

Lectures go on from nine o'clock till one. In comparatively late years the system of college lectures has been quite recast, and a plan of inter-collegiate lectures set on foot which is advantageous in many ways. First of all, it does away with the necessity of each

college giving a separate though similar set of lectures to its own batch of men; and enables all men to hear the best lecturer on his special subject. It also has the advantage of bringing the colleges more together, thus preventing them from settling down into so many isolated communities.

It would seem appropriate at this point of our subject to say something of the many and estimable Dons,—these, the worthy deliverers of the lectures. There is of course the sweetly unconscious funny Don, who just manages to say the wrong thing if the wrong thing can be said, around whose often unoffending head the various *bons mots* of the University gather: he who in giving out the hymn in chapel says, "Kingkering congs their titles take," and when in the pulpit refers pathetically to man's conscience as "a half-warmed fish inside us;" he who at a dinner party, his eyesight not being of the clearest, politely but firmly stabs his fair neighbour's receding hand with his fork, remarking, "*My* bread, I believe."

These most attractive figures, however, must be left behind. It is one o'clock, lectures are over, cap and gown—those badges of servitude—are chucked into a corner, or, if the owner is a careful man, hung upon a peg. Luncheon has just been brought in by the scout, and as it generally does not consist in much beyond bread, cheese, beer, butter, and 'squish'—commonly known as marmalade—it is soon disposed of, and a large proportion of the undergraduate inhabitants is marching in twos and threes, all be-flanneled, down to the river. One of the wholesome disciplines of Oxford life is this constant clothes-changing; in fact the undergraduate has a sort of feeling that he has not quite done his duty if he has not got into his flannels and out again in the course of the afternoon. Down to the river they are all of them going, so thither they shall be followed. Boating, rowing, is without doubt the chief sport of Oxford; the river is by all acknowledged to take precedence of the football or cricket ground. The place the college 'eight' holds on the river is more important even to the football and cricket men than the number of matches won. It is to the river first, then,

that the freshmen invariably flock. They have put down their names on the list of 'Gentlemen wishing to be coached,' and so down to be coached they go. A weary time the patient 'eight's men' have of it, calmly licking into something approaching to form the cubs of watermen who many of them have never touched an oar before. Two by two they are taken out in 'tub-pairs,' and by the end of the week many are very tired of it, and more are very sore, so that when they find their names no longer down on the boating list they have a solace for their grief. Each term has its races, each of ascending magnitude and importance. In the Michaelmas term each college takes the most interest in its own 'college fours,' the 'varsity fours are also rowed, but every college does not send up a crew. About the middle of the Lent term the 'Torpids' come on. But why *torpids*, seeing that the boat is propelled by eight brawny striplings straining every nerve to 'bump' or prevent themselves from being 'bumped'? A strange misnomer this; but rumour supplies the key by telling us that these races used to be rowed under circumstances of the most genteel leisure, with no more energy in fact than was compatible with the beaver hat on head and the cigar between the lips—*O mores, mores.*

The summer term now has come, and the select and superior college 'eight' may be seen in the cool of the afternoon training down to Iffley and back with the constant attendance of the coach on the tow-path. The vacancies in the boat are filled by the pick of the torpid men, who are just at first feeling the reverse of at home in the new 'light boat' with its sliding seat. But the crews are all getting fast into excellent form, and the 'Review' and the 'Magazine' are busy with their oracular prophecies which never come true, all preparing for the festive 'eights week' which is now so close at hand, when almost every man is expecting a sister or a cousin, or an aunt to come up. Words fail to describe the indescribable—and who will deny that such is the scene presented by the Oxford river on a fine afternoon during the 'eights week'? The afternoon sun makes everything lovely everywhere, and specially Oxford—and of all parts of Oxford, specially the river; but when

that river, in addition to its picturesque barges, has those barges with their flag-poles decked with flags and their roofs decked with ladies in all the glitter of their gay summer gowns—how shall we picture the sparkling brilliancy of the scene? The barge roofs are packed, because it is only a few minutes to six o'clock when the highest division of the boats rows. The dull 'boom' of the five minutes' gun has just floated up from Iffley, and the breathlessness of suppressed excitement is fast spreading; there is a craning of necks and a fixedness of gaze in the direction of Iffley—the 'minute gun' has gone; every happy possessor of a watch at once pulls it out and notes the seconds—the excitement and expectation become almost insupportable. We picture the crews in the different boats —now 'forward all'—the coach stands by the side of his eight scrutinising the dial of his stop-watch which he clutches in his hands—'half a minute gone'!—'three quarters'—then, counting the seconds, 'five, four, three, two, one,'—BANG—the gun is fired, your breath is released, and the boats are away, with a crazy crowd of yelling undergraduates running and stumbling and tripping on each other's heels, making the tow-path look like a moving living thing. The first glimpse the barge-bound ladies get is when the boats emerge from the narrow bend in the river, or 'gut' as it has been called from time immemorial; they hear the shouts and see the splash of the oars; gradually the boats come nearer and nearer, and the shouting grows louder. 'Well rowed, Corpus, well ro-o-owed.' But the boat behind is rowing better. And now is seen the most thrilling sight that an Oxford man ever knows; excitement compared with which hunting the grizzly in the Rocky Mountains is as nothing. There is going to be a 'bump'; only half-a-length now between the first boat and the second; that half length is now a quarter—now there is only a yard between them—the second boat has overlapped; in vain does the 'cox' of the leading boat turn out—the nose of the other boat creeps up to his side, and—horrors!—there is the fatal though almost imperceptible shock—'a bump'—which the defeated 'cox' must acknowledge by holding up his hand: *then* the shouting. If great before, what is

it now? But enough; your pardon, reader, if staid and sober utterance is lost under the influence of re-awakened enthusiasm.

It would seem an unfortunate arrangement of some now long-forgotten University authorities, that the most important 'schools' are invariably held at the end of the most delightful and festive term. The 'eights' are over; but neither the sister nor the cousin nor the aunt have left, and many are the consequent struggles between the necessary reading and the still more imperative river pic-nic—the pic-nic generally has it. But the end even of the lovely summer term will come, and one is soon quite used to seeing black-coated and white-tied individuals marching with serious mien to and from the same direction, viz., the Schools.

The last day of term, and again the ceaseless stream of hansoms may be seen carrying the self-same portmanteaux to the station which only a short eight weeks ago had been brought thence, and dear old Oxford is left for the four beautiful summer months to rest from her busy University life.

Well, what shall we say is the net result of this University life of which the above is such an incomplete and inadequate sketch? What is the special good a man can get by coming up to Oxford? The present head of one of the Colleges was heard to say that he should never advise a man's coming up to the University unless he had a serious purpose to *do* something, and that doing more than amusing himself or making friends. That was a wise word, and a word the wisdom of which everyone who knows Oxford will endorse. If a man comes up to Oxford without an anchor of some sort, he will pretty surely go adrift. When at Oxford he is practically and for the first time his own master, and is at liberty to go in that direction known as 'the dogs' if he is so minded. He is for the first time *alone*, and has to make his own choice. If he is in the right direction, he will find all kinds of influences at work from which he will gain help in every way. What a University career gives which is really so valuable to a man in after life, is just that which it is most difficult to define; it is that intercourse among

equals which shows a man his strong points, as well as manifesting his weak ones; that exchange of ideas which goes on to so large an extent in the numberless in-college and out-college societies; that intellectual knuckle-dusting to be met with at debates; and that quiet talk of friend and friend, all of which things go to make up in infinitely varying proportions that sum total of the special influence a University training has to impart; all of which things help to throw some light upon that wise word spoken of Oxford already quoted, but which will bear repeating: "To have loved it is a liberal education."

A SOUTH AMERICAN CITY.

By ARTHUR NEW.

Porto Alegre is, I believe, a place which ninety-nine out of every hundred people either never heard of, or, at least could not describe its geographical position. And certainly there is no special reason why it should be included among important towns, whose names and situations are usually taught in schools; still, for all that, to its own inhabitants it is a very important place indeed, regarded by many of them as a centre of civilization, a place for whose welfare the rest of the world must live and work.

The lively port, as its name signifies, is not on the sea coast, although in direct communication with it, and is reached by steamers from Rio de Janeiro or Montevideo, between which cities it lies. It is the capital of Rio Grande de Sul, the most southerly of the provinces of Brazil. By looking at any map of South America, the place is easily found near the north end of a somewhat large lake, called Lagoa dos Patos, or Lake of Ducks, on the river Guahyba, at a point where four other rivers join it. It has a fine situation, and the view on approaching in the steamer at early morning in fine weather, which prevails in that climate, is exceedingly beautiful. The city stands on a rising promontory, or peninsula, and presents a well arranged proportion of red tiled and clean, light-coloured houses, with foliage and flowers—palms and banana trees being conspicuous—with a distant background of well covered hills. The houses in the town itself are arranged in fairly wide and regular streets, and are also scattered both up and down the river, as well as inland, for a distance of a couple of miles in each direction. These houses in the outskirts are mostly

surrounded with well-planted luxuriant gardens. Its population is estimated at from forty to fifty thousand (but no census has been taken), and is composed of various nationalities. The people of Brazil are chiefly of Portuguese origin, and there is a large proportion of them here, besides Germans and Italians, who have settled in the province as colonists in very large numbers, and a few French, English, and other Europeans. There is also a large Negro population, originally slaves, and even now some few remain, although most, if not all, are working out their freedom, to be obtained in two or three years. The language is Portuguese, and everyone speaks it after a short residence there, although, as there are so many German tradespeople in the city, their language is almost equally useful for shopping, while in the German country settlements, Portuguese is scarcely ever used, and often not understood. The climate is decidedly warm, as would be expected from its position—30° south latitude. The summer is unpleasantly hot for one or two months. January, February, and March are the worst, especially the two first. There is not much rain then, except after a spell of close thundery heat, and then a violent thunder storm, with drenching rain, clears the air, and a few days of pleasant weather follow. In March, rainy days are more frequent, although very hot ones intervene. In April, it becomes pleasantly cool; this and the following two months being generally fine and sunny, without either excessive heat or rain. At this time fogs are not uncommon in the mornings. In July or August, cold south-west winds prevail, and often several weeks of really cold weather are experienced, and even ice may be sometimes found in the early mornings, though this is rare, as the thermometer seldom falls below 40° Fahrenheit. The effect of the cold winds on the foliage is severe. The grass will not grow, but withers up, and cattle and horses suffer considerably for want of food. In September warmer weather sets in, and from this time to the end of December is the finest season of the whole year: beautiful, clear, fresh nights and mornings, fine, warm, sunny days, not oppressively hot, and the fresh green of the new spring verdure. In December, thunder

storms are common, and even as many as two or three distinct storms occur in one day, accompanied by the most vivid lightning and deafening thunder imaginable, but damage rarely results from them.

The Porto Alegre houses are nearly all built on the same model, of the roughest construction and most primitive accommodation, but they are very highly rented. Rent is always calculated by the month, and paid monthly. An ordinary dwelling-house, for a small family, in the city, could not be got for less than four or five pounds a month, and double that amount would have to be paid for one with anything like sufficient room for an average family, according to our ideas. A tenant may take possession on any day, and can leave when he likes, without previous notice, rent being payable from the day of receiving the key to the day of giving it up. As Brazilians are most irregular in discharging their financial obligations, they frequently take advantage of these facilities in renting houses, and landlords often have difficulty in enforcing payment of their rents. An Englishman can always get a house at a lower rent than a native, not only because his money is considered safe, but because he usually leaves the house in better condition than he finds it, while a native will allow it to get disgracefully dirty, and never does anything in the way of improvement, as he seldom stays long in one abode. It is usual to describe an ordinary dwelling-house by saying how many front windows it has, and this gives an exact idea of its whole construction. They have generally one floor only, at a height of a few feet from the ground, a narrow frontage, but extend far back. In front is the street door, and a sitting-room, with one or more windows looking into the street; behind the sitting-room is a bed-room, lighted only by a pair of glass folding doors, opening from the front room; there is another similar bed-room behind the first, only lighted from the dining-room, which is further back, and is the full width of the house. The passage from the front door opens into each of the three first rooms, and leads into the dining-room, where it terminates. The dining-room is usually lighted

by windows looking into a small courtyard, beyond which is the kitchen and scullery, which communicate with the dining-room by means of a passage on one side of the yard. Some principal features of all the houses are: rooms "en suite," communicating with each other, bed-rooms without windows, boarded ceilings. Until late years bare white-washed walls were the rule, and they are still usual in the smaller houses, though wall paper is now being more commonly used. The floors are either bare boards or have only occasional squares of carpet or rugs. Fire places are never used in any rooms, and indeed are rarely required, except for about a month in winter. Stoves are used for cooking, although the true Brazilian plan is a rough brick fireplace, with an iron plate fixed above the fire, fitted with three holes of graduated size for the cooking pots. The only fuel is wood. In arranging their drawing-room furniture, they have one universal plan, which I have never seen varied:—a settee or sofa is placed against the wall, and at right angles to it, at each end, is a row of chairs extending into the room, about four or five in each row, the whole thus forming three sides of a square. Here visitors sit and talk together. Another indispensable appendage of every drawing-room is the spittoon, two or three of which are always conspicuous.

Having given a short description of some of the features of the houses, I will now mention a few of the customs and characteristics of the people, where they differ from ours. Appearances are everything with them, and as long as the surface is fair to see, no matter what is the substance. They decorate the fronts of their houses elaborately with stucco, and keep the outside well white-washed and clean, but the bricks of which it is built are very roughly made, and laid without any regard to rule and level, while they altogether neglect cleaning and painting the interiors. I once bought some polished cedar chairs, but when I came to examine them, I found that all the polish was in front, while behind there was no pretence of polishing at all. The ladies spend neither pains nor expense in dress, and always appear in the streets, visiting or shopping, most

elaborately attired,—in fact dress is the chief end and aim of a Brazilian woman's life; but the same ladies, in their own houses, go about in dressing gowns, or in general dishabille. The usual meal hours are as follow: on getting up, which they do about five or six o'clock, they take a cup of hot coffee and milk, with perhaps bread and butter. They breakfast about nine to ten o'clock; the meal is a substantial one, with two or three courses of meat or fish, and afterwards eggs, or an omelette. They drink wine or beer with it, concluding with hot coffee and milk. At three or four o'clock they dine. This meal invariably begins with soup, followed by fish and three or four courses of meat, sometimes sweets, cheese, and fruit; concluding with a cup of black coffee. They have the same meat and poultry as we have, but of a much inferior quality, especially the mutton, which is scarce and coarse, and so, little used. Hares and rabbits are unknown, except the latter as household pets. At eight or nine o'clock they take tea, usually green, and biscuits. As a rule they retire early to bed. Business hours in the shops and warehouses are from early morning—seven in summer and eight in winter, until dark—about seven or eight in summer, and half-past six to seven in winter, with two intervals for meals. As nearly everyone lives either at his shop or warehouse, or close to it, it is not found inconvenient to go home twice a day for meals. On Sundays, all places of business are closed, except provision dealers, who must close at ten a.m., and chemists, who may keep open all day. Drink is sold at the provision shops; but it can also be had at the restaurants, and these latter are open all day on Sundays.

The people are exceedingly polite in their manners, and regard that as of far more importance than sincerity. They are in reality most insincere, and always say to you what they think will please, often going out of their way to do it, instead of what they actually think. Gentlemen raise their hats to each other in the streets, on entering and leaving shops, and often shake hands as well; also on getting into a tram, or railway carriage. They shake hands far more frequently than we do. Members of the same family, even, shake hands all round every time they meet, and children on coming

into a room shake hands at once with every one present, whether they know them or not.

It is quite the exception for the street doors of private houses to have bells, and it is the custom for a caller to clap his hands outside the door, which is frequently ineffectual in attracting attention. Knocking at the door is only adopted by beggars or dependants.

Servants are a great difficulty; the best ones are black, either slaves or freed, but it is very rare to find a capable or trustworthy one: nearly all are lazy and dishonest. White servants are to be had—Germans, Italians, and Brazilians—perhaps more of the first, but they are generally very independent, and often dishonest. Wages are very high. A cook gets at least £30 to £40 a year, and frequently sleeps out of the house, going away as soon as dinner is over. Other female servants are paid from £20 a year upwards. These rates apply to negroes as well as whites, the former being sometimes slaves, let out on hire by their owners, who receive their wages, and often neither properly clothe them nor allow them any money to spend themselves.

Now for a few words about the public buildings and works. On the highest point in the town stands the Cathedral, or "Matrice," an ugly plastered and white-washed building, with two towers in front, and a wide flight of steps up to the doors. Inside it is like all continental Catholic churches, but lacks altogether architectural beauty. The people are nearly all Catholic, but only a small proportion attend the churches, except at masses for their deceased friends. There are half-a-dozen or so other churches in the town, besides one German Catholic church and a German Protestant one; but the latter only has service each alternate Sunday. Outside the town, about two miles distant, is the Cemetery, in a fine situation on high ground, and with a separate part for Protestant burials. In the same square as that in which the Cathedral stands, are the Palace, where the President of the Province resides, the head of the Provincial Government, and appointed by the Emperor; the Town Council

House, the Provincial Assembly, the Theatre, and a Concert Hall. The centre of the square is laid out as a public garden, and enclosed with substantial iron railings. Other public buildings are—the General Hospital, Portuguese Hospital, Athenæum (with a library), Military School, Barracks, Arsenal, and Prison. The Provincial Bank and the German Club are fine stone buildings, both of quite recent date. The town is also ornamented with handsome fountains in various parts.

Three lines of trams radiate from the centre of the town, one going near the side of the river, down stream to the suburb of Menino Deos, or "Child God," where there is a church, a race course, and many large villa residences, and which is a favourite holiday resort; another line follows the river bank in the opposite direction; while the third goes inland, the distance of each being from two to three miles. The trams run about twice every hour. The cars are both closed and open, the latter being most numerous, and far pleasanter in fine weather. The seats of these are arranged across the car, so that the passengers face the way they are going; they are roofed, but open at the sides and ends, although curtains are provided all round. The cars are drawn by mules, small and tough, wiry animals, but much better than horses, as they do more work with less food. A ride in a tram costs about fourpence as a minimum, but books of tickets are sold at a slightly reduced rate. The streets of Porto Alegre are lighted with gas, but owing to its heavy cost it is little used in private houses. There are also water-works, giving a not very copious supply of water, brought in pipes from a stream about twelve miles distant. Drainage is very simply and most imperfectly effected. There are open gutters on each side of the streets, which lead eventually into the river; but frequent rains are necessary to keep them properly flushed, so that in dry weather they are decidedly offensive. A Telephone Exchange has been in operation the last eighteen months, and is supported by about 150 to 200 subscribers, who pay about £11 a year each.

There is one line of railway from Porto Alegre, about twenty-eight miles in length, leading to New Hamburgh, a small town or

village in the German colonies, and passing through Las Leopoldo, which is the chief town or capital of the colony. These two places are on the outskirts of the large district that lies to the north of Porto Alegre, now extensively cultivated by Germans, and where their language is exclusively spoken. The railway was made and is worked by an English Company, but has never paid any dividend to its ordinary shareholders. It is a narrow-guage single line, and on week days two passenger trains are run in each direction, meeting each other half way, and accomplishing the distance in two hours, stopping at five intermediate stations. For the last two years, on Sundays and holidays, four trains have been run each way, at reduced fares, which are well patronised by people travelling for pleasure; and these have considerably increased the receipts of the line.

Although this is the only railway starting from Porto Alegre, there is another in the neighbourhood, of larger extent and importance, that starts from a point about thirty miles up the principal river, called the Jacuhy, at the confluence of another river, the Taguary. As it would be a difficult and very expensive work to bring the railway to Porto Alegre itself, since it would have to cross the latter river—which is very wide—besides a number of other rivers that intervene, it is necessary to proceed by steamer to the starting point of the railway, which is projected across the Province in a western direction, to the city of Uruguayana, on the frontier of Uruguay and on the river of that name. It is intended eventually, however, to bring the railway to Porto Alegre. The total length when completed will be about four hundred miles, but little more than about two-fifths of the distance is at present open. The steamers in connection with the railway leave Porto Alegre about eight o'clock every evening, and reach the railway station soon after midnight. There is fair sleeping accommodation on board, for saloon passengers, who are called about five o'clock in the morning to get into the train, after taking a cup of coffee. The speed is slow, and the line, which takes a very serpentine course, passes several small towns—centres of the cattle-grazing

districts—where stoppages are made, the two principal being Rio Pardo, where tobacco is cultivated, and Cachoeira, where there is a large charqueada, or cattle-slaughtering establishment. The present terminus is Santa Maria da Boca do Monte, which means "Saint Mary of the Mountain pass," and the train arrives there about two p.m. There is only one train a day each way. The return train leaves Santa Maria about six in the morning, and the steamer in connection arrives at Porto Alegre about seven o'clock the same evening. The line is being made and worked by the Brazilian Government; the engines and carriages being made in the United States, and the general appearance of the railway, and plan of the stations, is similar to that on the Continent of Europe. As an additional means of transport in the Province, there are several steamers plying up and down the different rivers, carrying both goods and passengers. They are all paddle steamers, and of very light draft, with a saloon in the stern and promenade deck above it.

The chief industries of the Province are cattle breeding, and maize, beans, mandioca, and tobacco cultivation. There are also breweries, furniture factories, soap and candle makers, who do rather more than supply the local demand. Fruit is very plentiful, and includes grapes, oranges, lemons, figs, peaches, pineapples, quinces, guavas, bananas, strawberries, melons, and apples. Of these oranges and grapes are the most abundant. There are more than half-a-dozen varieties of the former; they begin to ripen in April, and some kinds can be had even as late as November. Soon after the oranges go out, the grapes come in; but their season is much shorter, lasting only from December to February. The Italian colonists make wine from the grapes, both red and white, but it is of very poor quality and most of it requires to be fortified with spirit, to prevent its going sour, which spoils its flavour. Sugar cane is also grown, and is used for making a coarse spirit, called caxaca, which is consumed in large quantities by the working people, and costs very little, as there is no duty upon it.

Mandioca is cultivated for the sake of its root, which is something like that of the horse-radish, though the plant itself has no

resemblance to it. The root when dried is coarsely ground, and the meal, called "farinha," is eaten with meat, and is as essential an adjunct to a Brazilian dinner table as salt is to ours. The root is sometimes simply boiled as a vegetable, and eaten like potatoes. Starch and tapioca can also be profitably obtained from it.

Beans—in Portuguese "feijão"—are, perhaps, the largest and most important of the vegetable products. They are like haricot beans, only black, and when stewed form the national dish of Brazil. They are doubtless very nourishing, but rather coarse for a European palate. Nearly all the common English vegetables are easily grown—potatoes, cabbages, turnips, carrots, lettuces, and especially tomatoes, which far surpass ours.

The most important industry of all is cattle breeding, and the country is as favourable for this as the River Plate district, where Liebig's celebrated factory is. The animals are left to graze at large, and, as the grass is poor and scarce in winter, and they are not artificially fed, many of them die; and it is only during the summer that they are in a condition for killing to advantage.

I visited one of the principal killing establishments last summer, and will give a short description of it. It is situated at Cachoeira, on the Uruguayana railway, in the heart of the best breeding districts. Killing commences in December, and herds of cattle are collected at the place to be slaughtered. Between two and three hundred animals are dealt with every day, and during last season over forty thousand head were killed. A cow is not fit for killing till four years old or upwards.

There is a series of enclosures, gradually diminishing in size, staked round with strong posts fixed close together, upright in the ground, the smallest and last being connected with the butchering shed. Each enclosure is separated from the next by a gate or portcullis arrangement. The cattle are driven, forty or fifty at a time, by men, mounted and on foot, from one enclosure to another until the last, holding perhaps about fifteen of them, is full. This is a very noisy proceeding, with the bellowing of the terrified cattle and the shouts of the men, who have great difficulty

to get the poor beasts to go to their fate. A man stands outside this last enclosure, on a raised platform, armed with a lasso and a sharp-pointed knife. He first throws his lasso over the horns of a cow, the other end of the lasso passes over pulleys, and is attached to a pair of yoked oxen outside the enclosure, which are immediately driven forward by another man, dragging the captured animal to the further end of the enclosure, where an iron truck of suitable size, and level with the ground, is ready to receive it. When dragged fairly on to the truck, the man who has lassoed him thrusts his knife into the back of the animal's neck, and he instantly drops down dead. The lasso is then detached, the truck with the cow on it is wheeled away into the shed, which adjoins the enclosure, and by the time the next animal is lassoed the truck is back in its place again, after having left its burden to one of the butchers inside. This part is revolting enough to witness, but the scene inside is still more so, where fifteen or twenty men are busy in all stages of cutting up and skinning the cattle. One man is able to finish off a beast in about fifteen minutes. The slaughtering begins at midnight, and goes on until eight or nine o'clock in the morning. The place is lighted by electricity, and this gives the scene a more ghastly effect than it would have by day. The hides are soaked in brine, and are then shipped off in a moist state by sailing vessels to Europe. The meat is all cut from the bones and salted, piled up in huge stacks, with layers of coarse salt between, and then pressed with weights. I inquired how many cows had been used to form one stack of meat, in process of salting, and was told about seven hundred. After remaining thus some eight or ten days, it is spread out on rails in the sun to dry. This is effected in a day or two of hot sunshine, and it is then pressed into bales, packed in canvas, and shipped off to Rio de Janeiro, Pernambuco, and the north of Brazil, under the name of "charque," or in English, jerked beef, one of the favourite forms of food in Brazil. It is eaten with black beans and mandioca meal. The tongues, kidneys, tails, and some choice parts of the meat are salted in brine, put in tins, cooked, soldered up, and thus form the preserved

tinned meat familiar here, a much more agreeable commodity than charque. The bones are either burned to make bone-ash for the English earthenware manufacturers, or made into animal charcoal, used in refining sugar. The horns and hoofs are sent to Europe for manufacture, the feet and other suitable parts made into glue, the fat is boiled down into tallow, and the blood makes manure; so that every particle of the animal is turned into some useful product. About June the slaughtering season ends, for during the winter not only are the cattle unfit for killing, but the weather is not fine or hot enough for drying the meat. During the six months the work goes on there is no cessation; even Sundays and holidays are full working days: one day only is an exception, and that is Good Friday. About two hundred men and boys, of various nationalities, are employed. They all live on the establishment, in about fifty or sixty small huts built of bamboo cane, plastered with mud. The manager has a good-sized and substantial brick house on the premises; not a very agreeable situation, as a strong and peculiar smell of animal matter pervades everything, and though said to be not unhealthy, it requires time to get used to.

Of the amusements in which the Porto Alegrenses indulge, perhaps the most popular is horse-racing. They have two race courses, belonging to two different societies, one of which is called the "Jockey Club," and races are held at one or other of them almost every Sunday and holiday. The horses are much smaller than ours, and very inferior; but great pains are taken with their training, and English horses are sometimes imported for improving the breeds. Horses are very low in price, costing from about two pounds up to thirty, though higher prices are paid for special animals. For pleasure and exercise, a very fair mount can be got for about five to ten pounds.

There are two theatres in the city—one a large well-built place, where good entertainments are frequently given, the most popular being comic operas; the other is an ugly wooden erection, chiefly used for circuses and variety entertainments. There is also a good-sized concert hall, where a Philharmonic Society occasionally

gives amateur concerts, which are well patronised, and attended by all the principal people. At these concerts the ladies always occupy the seats in the centre of the room, while the gentlemen sit or stand all round the sides. Balls are exceedingly popular, especially at carnival time, when several masked balls are given.

One other peculiarity must be noticed, and that is the way criminals are treated. One frequently meets small parties of men, walking about in chains, generally two chained together both hands and feet, and accompanied by two or three policemen. These prisoners carry bundles of shoes, or clogs, or other fruits of their prison labour, and they carry them round to the various dealers in such things, offering them for sale. These prisoners are also allowed to pay visits to their families, always, of course, strictly watched and guarded.

In conclusion, I must mention the institution of Lotteries. They are established all over Brazil, in most of the different provinces. In Porto Alegre there is one drawn almost every week. The profits are devoted to some hospital, church, or other charitable purpose; but the profits form a very small part of the amount paid for tickets. The price of these, and the number and amount of the prizes vary, in different places, from about £200 for the grand prize, up to £20,000, or upwards, with a large number of smaller prizes, the smallest being little more than the price of the ticket. The tickets cost from four shillings to one pound, and are sometimes divided into ten parts, one or more parts being sold separately, and of course in case of prizes they entitle the holder only to a proportionate part of the prize. The tickets are hawked about the streets, and carried round to people's houses by men and boys who make a living by it; and in plying this trade they are fully as noisy, and far more importunate, than our newspaper boys, with their cry of "Lotteria corre hoje" (drawn to-day). In this manner tickets are sold in all parts both of the town and country. Should one of these ticket sellers sell a first prize, he generally advertises the fact in the newspaper, with a view to getting a reputation as a fortunate seller, and

thus increase his business. They get their profit by charging more than the nominal price of the ticket, which they themselves have to pay. The actual drawing is done in public, by orphan children, and the winner of the first prize is always expected to give a substantial sum to these children. The lottery system has a most pernicious effect on the people: it deprives the majority of them of their hardly earned savings, while most of the prize winners make a very bad use of their winnings. Of late the more enlightened newspapers have advocated the abolition of lotteries, but, as charitable institutions are benefitted, and the Government levies a tax on them, there are powerful arguments in their favour.

(1)
I wonder if this is one of those dreadful wires I've heard so much about lately –
(2)
There's nothing like trying –
(3)
To think this innocent looking wire could have reduced him to this little heap of ashes
(4) Next!
(5)
Is it possible they all came to their through just touching this harmless looking bit of wire ? –
(6)
Scene one hour later –

HUMAN NATURE.

"UNDER THE SOUTHERN CROSS."

By C. M. WELLBELOVED ("Wellbye.")

"Were I an Australian, as I am an Englishman," doubtless I should be as proud of the earth's smallest continent as I am of my own native land. The reason for this cannot be thoroughly appreciated by anyone who has not sojourned under the southern cross,—not only dwelling in the busy cities, but also in the pleasant country districts and roaming in the lonely bush, far from the haunts of men.

If Artemus Ward were asked to describe "sunny Australia," he might perhaps say it was a land of "all sorts and sizes." It is a "sunny land" whose atmosphere is so fine, that you can peer almost illimitably into the ethereal expanse of blue. The climate of almost every land is experienced in this our *Greater Britain*, from the heat of the tropics to the cold of the north of Scotland. There are grand and lofty mountains, in the nooks and crannies of whose beetling cliffs perennial snow is to be found. There are mighty rivers, which bear on their bosoms mercantile steamers for hundreds of miles, and which in dry seasons become but a chain of pools, or, as the aboriginals would say, "*billabongs*." There are miles and miles of almost impenetrable scrub—e.g., malke. There are vast plains on which not a tree or scrub is to be found—the "*One Tree Plains*" being said to be seventy miles square, with only one tree in the centre.

Herodotus marvelled at the Egyptians acting contrary to all other races of mankind: were he here, he would marvel still more at the contrariety of nature. In the Northern hemisphere the sun goes by the south, from east to west, but here he goes by the north.

In the old country the trees shed their leaves, but here they shed their bark instead. The quadrupeds of Europe are a staid race, walking soberly, or running earnestly through life; but in Australia they most comically *hop* through it. Indeed, they belong here to a different family altogether, being *marsupial*. And it is a question yet in this country, eagerly debated in the newspapers, as to whether they are viviparous or not. We have *birds* with gorgeous plumage, who have not the power of song. We have most beautiful but odourless flowers. We have trees which sting most painfully. But for all that, the advantages possessed here far more than counterbalance these disadvantages. It is a land in which every-one can find the climate he desires. It is a land flowing with *milk* and *honey*. No one need starve in Australia. If anyone has but the slightest acquaintance with the bush, he knows that its cardinal virtue is hospitality. It is a land for working men, who are able and willing to work. But, unfortunately, there are many *demagogues*, who, cursed with a fluent tongue, and lacking both wisdom and morals, are doing their utmost to ruin the working classes. These incite their fellows not to work, except on their own terms. Eight hours form a working day, and he is a *blackleg* who will work for less than *seven* or even eight shillings a day. Our "wise" legislators in this country have spent thousands of pounds on relief works for the unemployed, who are principally men who would not work for private people. They speak here of the "Government stroke,"—e.g., as little work for as much money as they can possibly get. And of course these unemployed preferred this to working for people who expected a fair return for their money. There have been great strikes in the country among workmen. For instance, in connection with the "Keira" strike, I saw one day at Bulli (a small mining township, where business occasionally carried me about a year ago) hundreds of men, women, and children congregated round the engine of a train which was to carry blacklegs, as they are called, up to the mine. The women thrust their children in the faces of the *non-union* men, asking them if they had the heart to take the bread out of the mouths

of their little ones, while the men swore that they would lie down on the rails in front of the engine before they would let it move, which they literally did. A few days later I heard that a party of women, armed with sticks and stones, and some even with fire-arms, had driven out of the mine a dozen men who had escaped their vigilance and were working there. But the strikers suffered for this, as, after the dispute was settled, and the men had again returned to work,—owing to the mine having lain idle so long,—a terrible explosion occurred, in which some eighty lives were lost.

As a general rule it is a man's own fault if he is not comfortably well off in this country. But along with this, as a necessary consequence one might think, there is a great love of pleasure. A "new chum" is amazed to see how much of the daily newspapers is devoted to sporting intelligence. And yet it is not so wonderful after all, when you remember that the climate is so suitable for all out-door enjoyment.

We do not come behind the "home country" in any kind of sport except, perhaps, *swimming*, of which not much mention is made in comparison with rowing, cricket, football, racing, &c., &c. The Australian colonies are always prepared to meet an English team in cricket, and would be only too glad if England would furnish a man capable of giving Beach a good race. As for riding, you would almost imagine that the natives were in the manner born to it. Children can ride when they are scarcely more than infants. The colonial system is, to go a mile to catch your horse to ride him a quarter of a mile.

In literary pursuits, however, we cannot boast of being equal with those at home. The Australian youth prefers to hunt a kangaroo rather than sit down to a book. And yet in towns and townships the intellect is not neglected; for instance, where I am living now, in Broughton Creek, we have a very fair "Literary and Debating" Society, the work of which is carried on very energetically. At the same time, thoughtfulness is not too plentiful a commodity in this land. One coming out from home generally has the best of an intellectual contest, if he but thinks before he

speaks. Of course in the large cities, such as Sydney or Melbourne, where facilities for mental improvement are more numerous, this may not be so noticeable. But still, even there sport and pleasure seem to be of the utmost importance in the eyes of many.

The Colonial capitals are "fast" towns, and perhaps Melbourne is "faster" than any other—certainly than Sydney. The Victorian capital was revolutionised through the "gold fever" many years ago, while Sydney is more conservative, and consists to a great extent of old (as the colonies go) families. It is amusing to notice the jealousy between the two cities, Melbourne and Sydney. Melbourne looking down upon Sydney as being an old "convict station," while Sydney in her turn refers to Victoria as the "cabbage garden."

Melbourne boasts of her mushroom growth, her broad streets, her magnificent buildings; but Sydney replies, "But look at our harbour." And truly no description can convey an adequate idea of its beauty. And it is all the more striking if you, a new chum, see it at the conclusion of your voyage. Say you get within the Heads at sunrise, or at any time during daylight: then you can almost imagine you are in fairyland for a couple of hours. You sail up, with green banks on either side, with beautiful balconied houses embosomed among the trees, while the scene is continually changing, inasmuch as the land is indented both on the right hand and on the left, by numerous bays, which you do not discover until you are abreast of them. He who has once seen Sydney harbour, in which all the navies of the world could ride at anchor in safety, can never forget it.

I might go on writing all day about Australia, and yet you would not have any true conception of it. I might tell you of the mosquitos, who prefer the blood of "new chums" before that of those who are colonised. I might tell you how I killed my first native bear. I might tell you of the nervousness which attacks one when he sees his first *snake*, and determines to break his snakeship's back. But I forbear, for are not all these things already written in many travellers' tales?

But let me in conclusion say that no one will ever regret visiting Australia, or even making it, as in my case, the land of his adoption. Only before he comes out here, he must make up his mind to adapt himself to circumstances, which are altogether new. And if any of my old schoolfellows think of visiting the Antipodes while I am there, they may rest assured of a welcome, as I should indeed be delighted to meet them, and thus make even more vivid the happy remembrances I still possess of Castle Howell School.

SKETCHES OF THE FALKLAND ISLANDS.

By U. VERNON HERFORD.

The German ss. "Theben" sailed from Dartmouth for Port Stanley, Falkland Islands, in March, 1885, via St. Vincent, Cape Verde Islands, and Monte Video. The voyage was pleasant but unexciting, there being only one first class passenger besides myself, and most of my time was spent in looking at the sea, a not very fatiguing occupation. At St. Vincent and Monte Video we went ashore, and at the latter place it was very delightful to get a glimpse of South American life—the beautiful suburban villas, streets and "Placas" gay with trees, and the ox- and mule-carts winding among the tall stuccoed buildings.

Whilst passing through the tropics we saw large numbers of flying fish. They rise out of the water in shoals, and skim through the air near the surface for a considerable distance, at last gliding into the side of a wave. They glitter beautifully in the sun, and have quite the appearance of flying. On stormy nights, sometimes, they are attracted by the ships' lights, and fall on the deck.

Early one morning, after a voyage of five weeks, we steamed into the sheltered harbour of Port Stanley, the seat of government of the Falklands, and the only town on the Islands. The settlement stood back from the beach and the jetties, and consisted of several rows of funny little wooden houses, with here and there a more handsome one, and in the middle, rising majestically above the other buildings, the Church and School, originally a Corn Exchange built before it was discovered that corn would not ripen in the Islands. A picturesque ridge of grey quartzite rock rises behind the town, and low undulating hills surround the harbour, dotted

here and there with the outlying houses of the settlement. The landscape is quiet and sombre in various shades of green and brown, and not a tree is to be seen, for trees do not grow on the Islands. The air is gloriously pure and invigorating, and the sun has a wonderful effect in lighting up the scenery.

The Falkland Islands are an English crown colony situated in the South Atlantic ocean, off the coast of South America, a little north of the latitude of the Straits of Magellan. They consist of two larger Islands—East and West Falkland, which are divided by a narrow strip of sea called Falkland Sound—and numerous smaller islands. Their total area is about one-sixth that of Ireland. These Islands consist chiefly of low marshy hills and rolling plains. There are, however, several ranges of hills which reach the height of from one to two thousand feet. Among the hills there are a few small lakes, and in some places there are lagoons. In these islands there are very curious geological phenomena called "stone runs." They are vast rivers of small boulders, sometimes very deep, and at the bottom of these "stone rivers" one may distinctly hear the trickling of water. There are many small streams, but few are large enough to be called rivers. The surface of the ground has two characters, the one being soft camp and the other hard. Soft camp [from Span: "campo" field or plain; cf. champaigne, campagna] is in a perpetual state of spongy swamp, but in the wettest weather most of it can be crossed on horseback. Hard camp is firm ground covered with short wiry grass.

The scenery of the coast is usually marked by low bluffs of earth, but in the south there are many magnificent cliffs that rise abruptly from the sea. The islands are noted for the number and excellence of their harbours.

The climate is temperate and even, the thermometer seldom rising above 70° or falling below 20° F; but the weather is very changeable, for a warm and summerlike morning is often followed by a cold and squally afternoon. Strong winds are very frequent, the commonest being the S.W. wind. Northerly winds generally bring rain, south winds snow, and the west wind is the dry wind.

Among the plants of the Falklands we might notice the fachine bushes, which are from two to five feet in height. They have a leaf something like sage and a white daisy-like flower. A very good tonic is made by boiling the leaves. There is also the Christmas, which is a vivid evergreen with a tiny white tufted flower, which grows close to the ground. The wild flowers are not very plentiful, and are chiefly white or yellow. There is a beautiful little orchid, light pink with reddish brown spots, a small brown calceolaria, several kinds of daisies, among which is the vanilla daisy, which has white fleshy leaves covered with down and a vanilla scent; a little white flower like almond blossom, and a fine white primula farinosa. A beautiful yellow violet grows on the bluffs in some parts, and there are also on some coasts facing W. and S.W. veronica or "box" bushes, which grow to the height of ten feet. The leaves grow in a cross form, one below the other in perfect symmetry, and the plant has small sweet-scented white flowers growing in bunches at the ends of the stems. There is a very curious plant called the balsam bog. It grows in the form of a hemisphere to the height of from one to three feet. It is like a gigantic moss, brown underneath and green on the outside. It has no apparent flower, but exudes (in hot weather chiefly) a powerful aromatic gum, which is very good for cuts and wounds. Sailing round the islands one is often struck by the sight of small islands covered with bright green foliage rising to some height above the sea. This plant is the tussack grass which grows in great clumps close together, sometimes reaching the height of ten feet. It grows something in the form of a palm tree, mounting up on a pillar of roots. The sheep and cattle have killed it off on the mainland as they are extremely fond of it, especially of the parts close to the roots, which are sweet and juicy. People can eat it, and it is said that wrecked sailors have supported themselves on it for a long time. Another kind of grass not so large, called cinnamon grass, grows in many places on the sea shore. The country abounds in peat. There is no other fuel, and there are no minerals of any value.

After a kind welcome by friends from the shore we land and taste true colonial hospitality. After a short stay in Stanley, spent in shooting, riding, &c., I went off in a tiny coasting steamer to visit my brother-in-law's sheep farm on the other large Island of the group, West Falkland, there to see something of the great industry of the Falklands,—sheep-farming.

The great occupation of the inhabitants of the Falkland Islands is sheep-farming. About two-thirds of the East Falkland is farmed by the "Falkland Islands Company," which pays a very large dividend. The rest of the Islands, with the exception of a few Government reserves, is divided into private farms varying from 120,000 acres to about 10,000 acres. On each of these farms there is a settlement where the master and labourers live. The settlement is generally on some harbour, and consists of a dwelling-house, cook-house (where the labourers live), a store, a woolshed, a dip, a horse coral, and perhaps two or three out-buildings, such as a cow-house, fowl-house, &c. The dwelling-house is usually small and built of wood, a few only being built of stone; the cook-house is the same. The houses are provided with shutes and barrels to catch the rain water. The "store" is a wooden building in which the necessary supplies are kept and sold to the men. In the wool-shed, a building which is surrounded by pens, yards, and paddocks, the sheep are sheared and the wool stored and made into bales. Inside there are pens for sheep. The sheds will usually hold about three hundred sheep under cover. The "dip," that is the appliances for dipping the sheep, is usually upon the stream nearest to the settlement. It consist of a "race," or fenced sheep-way leading into a long wooden tank, fed by two boilers, which in its turn leads into draining pens. There are, of course, paddocks attached to hold the sheep before and after dipping. The horse coral is a strong wall or fence of stout beams and posts made in the form of a circle, into which the horses are driven by a man on horseback every morning, in order that those that are wanted during the day may be caught. The rider carries a triple thong of raw hide, with ox knuckle-bones at the ends of it, which he swings round to frighten

the horses. Cows are only milked once a day, as the feed for cattle is poor, and consequently they do not give so much milk. The farmers employ shepherds, who live in different parts of the "run," sometimes two together, sometimes with a wife and family, on their own grounds which have been marked off for their flocks. They have their dogs and their own troop of horses, and ride out every day to look after their sheep, and to save any that may be cast,—that is, lying on their backs and unable to get up. When the sheep have to be gathered for dipping or shearing, &c., all the shepherds meet overnight at one of their houses, and very early in the morning start out together in a long line, slowly driving the sheep towards the place where they want them gathered. This is often a long and tedious piece of work, and takes from early morning till late at night. The labourers live at the settlement, and are employed in the farming operations, or any of the work that wants doing. In the spring all painting and tarring of the buildings is done; and any building or carpentry that wants doing, or other odd jobs, in the winter. The first farming operation is spring dipping, when all the sheep are gathered and driven up to the settlement, where they are dipped. They dip about four thousand a day. They are then driven back to their respective grounds. About January or the end of December, summer in those parts, shearing begins, and lasts six or eight weeks. This takes place in the wool-shed, and the fleeces as they are sheared are taken to a table, where they are looked over, tied up into bales with twine, and sorted into their proper bins, where they are stacked. A good shearer will shear seventy in a day of ten hours, and that not rough shearing. When all the sheep are sheared the wool is taken down and pressed into bales bound with hoop iron. The wool is then shipped to Stanley, and thence to England, where it is sold by auction in London. After shearing comes autumn dipping, and then the busy season is over, and the men get a holiday.

It was such a settlement as this that I found when I landed at Hill Cove one autumn morning in May. It was not long before I had an opportunity, in the intervals of work, of going out with

my gun. My first attempts were on the wild Upland Geese which swarm upon the camp. Their legs are longer and their necks slenderer than those of the English sort. The gander has a white head and breast, and is mottled black and white, with clean black legs, while the goose is brown, spangled with blue-black, except the head and breast, and has a little white about the wings. They vary a little in color according to age. They go about in families, except at breeding times, when they go about in pairs. They eat great quantities of grass and berries. It is said that five geese eat as much as a sheep. The goose generally lays from five to seven or even nine eggs, and incubates four weeks. The little goslings come out of the shell covered with grey down, which they keep for several weeks. I once had a couple of little goslings which I tried to rear. They became very tame and would eat out of my hand, and used to follow us about the settlement; but, alas! one day they wandered too far, and were too trustful,—one was killed by a shepherd's dog and the other was lost. The Falkland geese are easy to shoot, as one can get within short range of a flock, walk quietly round it till several have their heads in a row, and then shoot down the line. By this means one gets three or four at a shot! Kelp Geese are more like our English geese in form. They are pure white in colour and live on the sea beach, feeding on the kelp and other sea weeds that are washed up. There is also another kind of goose, known as the Brent Goose. They are smaller than the Uplands and more thickset, and in colour the goose and gander are both like the female Upland. The only distinguishing mark of sex is the slightly superior size of the gander. They are plentiful on the beaches, eating sea moss and grass. They and the Uplands go inland to breed. There are several kinds of ducks—the Loggerhead, Greyduck, and Teal. The Loggerhead, the largest of these, inhabits the sea beaches, and lays on the bluffs. The duck lays between five and seven eggs. These ducks are very fat, and cannot fly. When frightened, they scutter along the surface of the water with their short wings and feet, and have therefore been called by some the "steamer duck." They

have a cream-white breast, and their other feathers are a mottled steel blue or slate. Young Loggerheads do not breed till they are two years old, and till that time they associate in flocks, whereas the old birds always go about in pairs. There is a very curious characteristic of the old birds. Each pair takes possession of a strip of beach, and a corresponding expanse of water. If, however, a strange bird of their species should trespass on this territory the intruder is attacked with great fury. The Loggerhead duck makes a very slight nest, chiefly of her own feathers. The Greyduck is a smaller and more elegant bird than the Loggerhead. It is of a mottled brown colour, with a crest at the back of its head. It associates in flocks, being seldom seen singly. It lays in very much the same places as the Loggerheads. While swimming about together they utter a harsh quack, and one will turn round as if it were addressing the rest. There are several varieties of Teal,—grey, red, and blue Teal. They are the smallest of the ducks, and the drakes have a flute-like whistling note, which sounds beautiful borne from a distance on the evening breeze. They frequent the ponds and the beach in flocks, but go up the streams in pairs to breed; the last year's young ones, however, stay together. It is a curious thing to notice that among nearly all these water birds the female has a deep loud voice, while the male has a shrill insignificant pipe. There is a beautiful heron or Quawk, as it is called, which has bright green about its plumage, and two long white feathers coming out of the back of its head. The young ones are grey. There is a pretty little "Oyster Catcher" like the English one, found in great numbers along the shores. It has a note exactly like the creaking of a rusty iron gate. It has a brilliant red beak and bright orange eyes; some are black, some black and white. They lay two eggs, in colour very like a plover's, on the bluffs, in no apparent nest. There is another water bird called the Grebe, or as the people call it, the "hell diver," from the speed with which it dives when frightened, thus making it very hard to shoot. The skin is very beautiful and highly prized. They are about the size of a Greyduck, but the neck is longer and slenderer. The head has

a large patch of white on it, which gives it a curious resemblance to the head of a cassowary. There are two kinds,—brown and silver Grebes. There is a large variety of sea birds—albatross, molly-mawks, penguins, shags, and many beautiful kinds of gulls.

The Turkey-Buzzard is the largest of the strictly land birds. It is nothing more or less than a small vulture. Its head is covered with naked red skin, except in young birds, which have a few black bristles; it has enormous nostrils, and nasty grey green eyes. The rest of its body is covered with rusty black feathers. It always has a strong and offensive smell, so much so that if you even touch its feathers the smell clings to your fingers. These birds do a great deal of harm to the sheep, but as they are cowardly and timid they are hard to shoot, so the farmers put a price on their heads. When a sheep is cast a turkey will pounce down and begin to eat its eyes, its tongue, and its tail, *while it is still alive;* the Jack-rook will do the same. The Jack-rook, or Johnnie-rook, is something between a hawk and a carrion crow. The plumage of the young bird is almost entirely black, but in a year or two some yellow feathers appear about the neck, wings, and tail. It is then called a king Jack-rook and is adult. Turkeys and Jack-rooks build among rocks on the tops of hills or in tussack islands. There are about six different Hawks: the black hawk, which is very rare, the black and yellow hawk, the great brown hawk, and the little blue grass hawk. The hawks in the Falklands are not so fierce as the English ones, the former being quite content with dead meat, if not preferring it. Hawks lay two or three eggs in a well-built nest on some lofty ledge of rock. If their nest is approached they circle round, uttering shrill screams, and occasionally swooping down on the head of the intruder. They will defend their nest with great fierceness and courage. Owls beautifully marked with brown and white are sometimes turned up out of the grass. There are two kinds of Snipe; the common snipe, which is found here and there on the soft camp, and the Jacksnipe, which come in flocks and only stay through the winter. The common snipe lays two large eggs, olive green mottled with black, in a nest made in the grass. This

kind is identical with the English brown snipe. They seem to be getting scarcer in the Falklands. The Dotrell is a bird with habits something like the snipe, but they flock together. They are about the size of swifts and of a brown colour with a white crescent on the breast. They make their nest in the long grass and lay two eggs, but they are more plentiful on hard camp than on soft. Sandpipers are smaller, of a lighter brown, and live by the sea shore. They are very like the dottrell. The Thrush is very like its English namesake, though not the same bird. It usually builds in fachine bushes. There are besides the robin, or soldier starling, with its brilliant red breast, the flycatcher, sparrow, lark, and several little finches.

There is not very much known about the sea fish of the Falklands. Grey mullet are very plentiful round the islands, frequenting the creeks at high tide. These fish are very fond of the mixed salt and fresh water which they find in the estuaries of the streams. They are sometimes caught in great numbers by building a wall of stones across a creek with an opening in the middle. The fish come through this opening with the rising tide. When the tide has risen to its full height this hole is blocked up, the water recedes, and numbers of fish are left in a shallow pool out of which they are easily taken. They are about the size of cod. The fresh water streams contain a small kind of trout. They average from two to eight ounces in weight, and are caught either with bait or fly. The angler, instead of stopping in one place, walks along the edge of the stream, pausing to throw in his line at a pool. If he does not get a bite very soon he goes on to the next pool, catching one fish here and a couple there as the case may be. Sometimes a man will catch six dozen, at another time six.

Hair- and fur-seals and sea lions live in their "rookeries" round the islands, and porpoises are often seen on the coast.

Before I lay down my pen I must say something about the other land animals of the Falklands. There is now no indigenous quadruped, unless it be the black rabbit which Darwin thought was a native. There are also brown rabbits and hares in some parts,

which have been imported. Fortunately they keep very much to limited areas, though some of the farmers are very much in dread of their spreading as they have done in Australia. There used to be foxes, but they were exterminated, as they did a great deal of harm to the sheep.

The most interesting wild animals are the wild horses and and cattle. These animals are the descendants of those brought over by the Spanish and French, who made unsuccessful settlements before the English came. The wild horses are confined to East Falkland, where they roam about in troops. They are small and hardy, and are caught and tamed when young by the Gauchos. The Gauchos are a very interesting class of men, who are skilled in the management and breaking of horses and all work connected with horses. The Falkland Gauchos, as their name shows, were formerly Spanish, and some still are of that nation; but the masters are finding out that Englishmen can do the work as well, and of course prefer their own countrymen. The chief work of the Gauchos is hunting the wild cattle, or "bullocking" as it is called. When the first English settlers came the wild cattle were very numerous and bold, but now they are getting killed off, and are very difficult to catch. The Gauchos use double-barrelled gun, lasso, and "balls" for their work. The lasso is a long plaited thong of raw hide, with a heavy iron ring at one end, and the other fastened to the saddle. The ring forms an easy-running noose with the thong, and the thrower making a loop about six feet long, having the ring on the middle of one side of it, makes a smaller coil of the rest of the lasso in his hand. He then swings the long loop round his head and throws it. By this means the loop flies through the air in a circle without closing, and falls over the head of the victim. As soon as the horse feels the beast pulling, it is trained to turn round and pull in the opposite direction, the rider dismounts and kills the animal with his knife. The "balls" consist of three thin plaited thongs of hide fastened together at one end with balls of stone wrapped in hide at the others. The thrower takes one of the balls in his hand, and swinging the others round his head casts

it at the animal's hind legs. The balls rotate through the air in a tripod form, and wrap themselves round the first thing they meet, so bind the animal's hind legs together and bring it to the ground. I will now give some account of a bullocking expedition I once made with the Gauchos. After an early breakfast one fine morning I set off with a young English Gaucho from the settlement where my brother-in-law's partner lived, for Dry Pond Shanty, where the rendezvous of the Gauchos was to be. This shanty was on a neighbouring farm, for our people and this neighbour had arranged that the two Gauchos employed by each should hunt the cattle together on both their grounds. My companion and I picked up one other Gaucho and the troop of horses on our way, and were very glad when we at last arrived at our destination after a long ride, and were welcomed by the two Gauchos who lived there. It certainly was the funniest little house you can imagine. There were two rooms,—a living room and a sleeping room: the one about ten feet square, and the other about twelve feet by six feet. The sleeping room especially was decorated profusely with texts, fashion plates, and pictures from the "Graphic," and "Illustrated," and a line of bunks ran round the room, with their bundles of blankets. There was a little porch to the door in which were kept meat, soap, bread, the towel, buckets, candles, saddles, &c. The shanty itself was built entirely of wood, lined inside again with boards and roofed with corrugated iron. The library of the establishment was small, consisting of one third-rate yellow-backed novel. It was late when we arrived, and we were glad of our tea of cold mutton and bread with tinned butter and tinned chocolate-and-milk, with private knives and one public spoon for helping the sugar and stirring our mugs with. Of course the table had no cloth on it. After tea, one of us washed up the things with water from a neighbouring stream, and peat from the stack was brought. We started on our first expedition some time before dawn. The horses were driven into the coral, we each saddled our own, and set out. There was something very strange and impressive in the ride through the darkness just lifting at the approach of day. After

riding for some time we sighted a herd on the side of a hill, with one or two young bulls feeding near, as is generally the case. We stole near and sent up a couple of bullocking dogs which we had with us to entice the young bulls. When the dogs came up to them the bulls turned round and rushed furiously down the hill after them. Two of the Gauchos leapt off their horses, and as the animals rushed down stood aside and shot them dead as they dashed past. These were soon skinned, and off we set again. On another day when we had sighted a herd we got as near as we could without being seen, and when the animals took the alarm we urged our horses to full gallop and gave chase. It was a glorious run. Down hillsides, up slopes, across rough ground, stones, bushes, tearing through soft camp, flying across level ground. An English horse would have been down a hundred times. We caught up the herd and the Gauchos, holding the reins with the left hand, the gun to the shoulder with the right, shot several.

The story of everyday life would not be interesting to the general reader; it will therefore be enough to say that after a stay of some twelve months I returned to England feeling that I had had a glimpse of life quite unlike anything I had ever seen before.

NOTES ON THE PHYSICAL GEOGRAPHY, FLORA, FAUNA, ETC., OF NORTHERN FORMOSA, WITH COMPARISONS BETWEEN THAT DISTRICT AND HAINAN AND OTHER PARTS OF CHINA,

By WILLIAM HANCOCK, F.L.S., F.R.G.S.,
Chinese Imperial Customs Service.

PHYSICAL GEOGRAPHY.

The geological features of the north end of Formosa are of peculiar interest; the district is eminently volcanic. The river between Tamsui and Kelung, together with the large alluvial plain of Banka, may be considered as the natural boundary between the Tamsui mountain system and that of the main body of the island. Following this line, then, we find the hills, where they abut on the plain, composed of stratified rocks which have been tilted up by the igneous rocks, and have generally a dip to the north-east. In some places, large greenstone boulders occur, resting on clay, but at Kelung, sandstone predominates. Passing on round the north coast, trachyte is conspicuous, and in several places I saw what

Note.—This paper, although published in the Chinese Customs Yellow Book among the Trade Reports, drawn up by direction of the Inspector General, Sir Robert Hart, is so generally inaccessible that it is welcomed as a valuable contribution to our volume. Mr. Hancock was invited by the Royal Geographical Society to read it before the British Association, it was noticed by Sir Joseph Hooker and called forth a leader in the *Times*.

seemed in the distance to be vast trap-dykes running out into the sea. The sandstone formation at Kelung presents a remarkable spectacle. In some places the surface resembles a series of billiard tables surrounded by rocks of different forms; in another place one fancies he sees processions of monks with their cowls down, whilst adjoining are fairy-like castles with elaborate and delicate ornamentation; and, again, deep fissures through which the water rushes, guarded by colossal nine-pins, the exposed surface of the sandstone exhibiting fossil bones in bas-relief. Against these rocks the smooth swell of the Pacific rolls in long undulating hills. The water close by is 200 feet deep. In front, and at a short distance from the land, Kelung Island—a volcanic-looking mass some 600 feet high, and resembling Kaoshan in the Miaotao Islands, Gulf of Pechili—rises abruptly from the sea—a dark and barren rock. The whole scene at this place is so weird, so strange, and extravagantly grotesque, so utterly unlike anything that one has ever seen or heard of, that all I could compare it to was the drop-scene in a theatre. Boating round the coast to Coal Harbour, one sees, below the surface of the water, extensive tracts of variegated coral, and so clear is the water that it is difficult to believe that the boat is not about to be dashed on rocks which are apparently at the surface. The general style of scenery bears a singular resemblance to that of the coast of Ireland at the Giant's Causeway. A large portion of the sea-coast at the north end of Formosa is made up of long sandy beaches, divided in places by mountain streams—in summer shallow and insignificant, but in winter, presenting formidable obstacles when journeying round the coast. A short distance north of Tamsui the beach is a field of lava, cracked, seamed, and scarred, with deep gullies and burst-up bubbles. In some places the lava has flowed against massive boulders, surrounded them, and then, apparently contracting, has left marks on their smooth surface; whilst stones and pebbles of lesser specific gravity have been floated along on the surface. But the most remarkable feature of this field is that it appears to have no connection with the extinct volcano of Tatunsoan, some four

miles distant; its greatest thickness is where it descends into the sea, while in the land direction it thins off and apparently disappears. In fact, there is strong reason to believe that it is the outer edge of a submarine eruption. In the case of Kelung, there can be no doubt that even at the present time there is active volcanic agency at work in some part of the sea, probably to the north-east. The water is occasionally covered with large quantities of floating pumice, and during the earthquake of 1867, several persons stated that they saw what appeared to be a mass of steam and water hurled into the air at some distance out at sea.

The general aspect of the Tamsui mountains differs somewhat from that of the mountains on the China mainland. From the peculiar circumstances of climate, the constant moisture and absence of very low temperature, they are more densely clothed with vegetation, but none are covered with forest. The axial chain begins just north of Tamsui, and runs about north-east. The south end is formed by the extinct crater of Tatunsoan, 3,000 feet, which height is maintained and even exceeded throughout the range, except in one place; and the mountain at the north end, terminating the range, I found to measure 3,600 above the sea level. In some places the chain rises to a sharp and narrow ridge, and the sides are torn by gullies and ravines. The crater of the Tatunsoan I ascertained to be about 450 feet deep and 800 feet in diameter. It is clothed with grass, and during the rainy season is converted into a small lake. As a specimen of an extinct volcano it presents few points of interest, and is not to be compared with the Maangza, in Hainan, though just four times as high.

Some two miles north of the Tatunsoan, and slightly separated from the chain, stands a second extinct volcano, but so little noticeable as such that I passed close by it for months without particularly observing it, and it was only when exploring an arm of the axial chain that I happened to look down and perceive the crater below. Its form is that of a rounded truncated cone. The sides are smooth and cultivated with tea; the height I found to be 2,200 feet, and the crater about 500 feet in diameter and 50 feet deep.

But the most remarkable peak in the district, and the highest mountain in North Formosa (marked on the charts as 4,174 feet), is the Chaosoan. On the 27th November I made an expedition to this mountain for the purpose of examining its structure and ascertaining more accurately the actual height. From its isolated position behind the main chain it is not visible from Tamsui, and a considerable ridge has to be crossed before getting near it. The ascent is laborious, in consequence of the dense long grass and masses of withered shrubby plants which constantly threaten to impale one. At 3,100 feet I came to a crater, from the rim of which, at the south side, a slight jet of sulphurous steam was escaping. This crater is the upper section of a rent which extends down the mountain on two sides. Ascending above this, I came to a series of miniature bowl-like depressions choked with herbage, all evidently of volcanic origin. The highest point I found to measure 3,650 feet. The view from the summit is of singular magnificence, embracing a great part of the north end of Formosa and islands thirty miles out at sea, and, looking across the Banka plain, the interminable forest-clad ranges of the interior, culminating in Mount Sylvia, 11,300 feet. From its superior elevation and northern position, the Chaosoan mountain is constantly enveloped in clouds—a fact to which the vegetation bore striking testimony.

Of the six sets of volcanic geysers in the district, five surround this mountain at various distances, some being on slopes; the remaining one being situated near Kimpaoli, some miles to the north-east. This was the first I visited. I was walking round the coast from Kelung, and had entered the mountains, in order to pass through to Tamsui, when my attention was attracted by the taste of the water of a stream at which I drank—that of sulphuric acid,—and I at once concluded that I must be in the neighbourhood of one of the geysers, which I shortly after reached. The place is a mountain glen at some 1,400 feet above the sea, the bottom covered with heaps of stones, *débris*, and decomposed rocks of a greyish tint, with patches resembling silicified sinter, and in

many places white from the bleaching action of the sulphurous acid. At various points are cracks and vents, from which jets of steam are expelled with considerable force, the edges of the cracks exhibiting a yellow surface of sulphur, whilst lower down the place has the appearance as though it had been full of water—in fact, a lake. The floor is a level tract of boiling mud, small jets being thrown up at distances apart, and the whole place being in a perpetual state of agitation. In one corner, higher up, the steam escapes as from a high-pressure boiler. The rocks surrounding the glen are blanched, and vegetation is destroyed. A river of hot water, overhung by clouds of steam, flows down through a gorge extending to the foot of the mountain; this gorge was formed during the earthquake of 1867, when the mountain was split open on the west side. I endeavoured to reach the edge of this mud lake, to ascertain the temperature, but found the surface of the ground so precarious and the heat so oppressive that I was compelled to desist. Continuing my journey on up into the mountains, I suddenly came upon a set of geysers at 1,800 feet above the sea, which entirely eclipsed those I had just examined. The place bore some resemblance to a lime quarry with precipitous sides, from which vast volumes of steam were being expelled into the air with a roar so great that I heard it reverberating in the mountains at several miles off, and such was the volume of steam that at the same distance I mistook it for a cloud rising on the side of the mountain. Into this place, then, I descended, and found a wonderfully interesting spectacle. The main vent from which the noise proceeded stands in a narrow chasm by itself, a branch of the ravine, and owing to the aperture being surrounded by other minor vents, I was unable to approach it. At another part of the ravine, however, there is a cavernous hole in the rock, in form resembling the entrance to a tunnel, and large enough to walk in at. From the mouth of this place clouds of white smoke, like steam, continued to pour forth in slow rolling volumes, occasionally almost hiding the entrance. Having observed this for some time at a distance, I watched a favourable opportunity when a slight shift of the wind

blew towards the mouth, and so carried the clouds of sulphurous steam over the top, and then I went up the entrance and looked in. The bottom was a cauldron of semi-fluid sulphur, somewhat of the colour and consistency of treacle, whilst the arched roof presented a scene of great beauty, being a mass of glistening yellow crystals of sublimated sulphur. From the interior proceeded deep subterranean rumbling sounds; but I was unable to remain more than a few seconds, the heat and smell were so overpowering. From the colour and consistency of the contents, I was able to judge approximately of the temperature. Sulphur melts at 232° Fahrenheit, and is then of an amber tint and fluid as water, but if still further heated, it changes in form, assuming, between 430° and 480° the colour and consistency of that which I had just seen. All these geysers vary in activity and intensity, and I was told that during earthquakes they exhibit great violence, the boiling water being thrown as high as fifty feet.

With such abundant manifestations of volcanic action, it might naturally be inferred that the district would be liable to earthquakes, and such, in fact, is the case. Formosa is situated between two great volcanic centres—Japan and the Philippines; or to state it more completely, the island is a link in the volcanic chain of Eastern Asia, extending from Kamtchatka to the Malay Archipelago. It has been surmised that some of the peaks of the great central range, which reach almost to thirteen thousand feet, are extinct craters, but as yet they have not been reached. A good deal has been written on the cause of earthquakes, but the exact conditions which bring about these violent convulsions are not yet understood; there are, however, certain recognised facts as to the direction and intensity of shocks.

On this subject, as in every other natural problem, what we really want in order to arrive at any satisfactory conclusion is a series of careful and accurate observations, extending over a considerable period, and collated from various centres of disturbance. Such work is being carried on in the Philippines, the observations there being made and recorded with great minuteness.

Although no special record has been kept of the shocks at Tamsui during the year 1881, the number has been considerable, and the direction in almost all cases has been from N.E. to S.W. Earthquakes would appear to be more frequent at Kelung than here. The sensation experienced during a strong shock is singularly unpleasant.

The first of this kind occurred on the 17th June, 1881, at 3-20 p.m., the day being bright and fine. Suddenly the office began to vibrate and then rock, so as to set all the things swinging on the walls. The shock lasted forty-five seconds. One observer from a window saw the ground running as if in small ripples; and the water at the river's edge was disturbed. My own sensation was as though the house were standing on a jelly. At 8-12 p.m. on the 6th July, 1881, whilst I was sitting on the verandah, the evening being calm and sultry, the house suddenly felt as though it had been struck a violent blow upwards with a large mallet. On Sunday, the 25th September, occurred the most violent earthquake known since that of 1867. The day was dark and gloomy, and heavy perpendicular rain was falling. The sea was greatly disturbed by a distant typhoon (raging off the coast of Japan). I happened to be writing at the time, when the room suddenly began to quiver. I laid down my pen and waited an instant, thinking it was probably one of the usual weak shocks, till the things in the room began to rattle. I then went to the hall and paused again, when I noticed the walls distinctly moving, whereupon I opened the door, crossed the verandah, and jumped down on the lawn. The ground by this time was running in distant waves, and the house was rocking up and down, groaning and creaking. The sensation was as though one were in a boat in a ground swell. Below, in the Native town, I could hear the shouts of the people as they hurried out of their houses, and the barking of dogs. It lasted considerably more than a minute. Lamps were swung violently from side to side, water was dashed two feet out of wash-basins, and people were affected as by sea-sickness. On board a steamer anchored in the river, the shock was such as to lead to the

supposition that she had touched the bottom, and soundings were taken. At Banka, a new massive stone gateway tower was partially ruined, a number of houses were thrown down, and several people killed. The earthquake of 1867 occurred on the 18th December; the sea ran out of the harbour at Kelung, leaving the anchorage dry, and in a few seconds it rushed in again in the form of two waves, overwhelming junks and people. The towns of Kelung, Kimpaoli, and Pachena were partially laid in ruins, Tamsui was severely damaged, and many hundred people were killed.

FLORA.

From the position of North Formosa—about latitude 25,—and the generally received ideas as to the great fertility of the island, it might be supposed that the district would exhibit a flora of considerable variety, at least rivalling that of the mainland. This, however, I have not found to be quite the case. Whilst it affords a few links with that of Chêhkiang and more with that of Fukien, it is, nevertheless, unlike either of them, and shows stronger affinities with that of Hainan—in fact, the littoral portion is almost identical. A forest scene in North Formosa (in the savage territory) is about the most typical representation of semi-tropical vegetation that one could conceive. It suggests some of the richest glen scenes of Chêhkiang carried several stages forward, but stopping short of the luxuriance of the Eastern Archipelago. The presence of Tree-ferns, Orchids, and Rattans affords the connecting links with the latter, whilst Azaleas, Lilies, and Rhododendrons refer us back to the former.

It seems to be a popular fallacy to suppose that the nearer we approach the tropics the greater the profusion of brilliant and conspicuous flowers. This has been specially dwelt upon by WALLACE ("Malay Archipelago"), and my own experience, ranging from Hainan to Pechili, through 20 degrees of latitude, confirms this view. One forgets, when standing in a conservatory, that the gorgeous array of bloom has been culled from many different regions—those of Guatemala, perhaps, figuring with plants from

Hindustan, whilst those from the Amazon mingle with treasures from the Philippines. To quote the words of WALLACE, "the result of my examinations has convinced me that the bright colours of flowers have a much greater influence on the general aspect of nature in temperate than in tropical climates."

In all my experience of Hainan and Formosa, I have seen nothing that for floral display could be compared with the scenes on the upper slopes of the Wut'ai-shan, near Peking, at 9,000 feet, where the streams are overhung by bunches of purple Lady's-slipper, the rocky clefts clustered with Pinks, Roses, and Geraniums, and whole acres tinged yellow by masses of golden Globe-flowers. Of 150 species of plants which I collected on this mountain, many were new to the flora of China, and some new to science. A theory had been put forward by an eminent botanist, that, taking into consideration the character of the Peking climate, provided there were any mountains reaching to about 10,000 feet, the flora of the upper portion would closely resemble that north of the river Amoor, and this was borne out by the series I collected. To convey some idea of the richness of the locality, appended are the names of a few, with comments by Dr. HANCE, in the "London Journal of Botany":—

Fragaria collina "is, I believe, the only true strawberry hitherto recorded from China proper."

Saxifraga cernua.—"Not uncommon in Siberia, but not heretofore recorded from China proper."

Phellopterus litoralis.—"Not previously found in China."

Pedicularis longifolia.—"This curious and very distinct species had hitherto only been found in Baikal, Siberia."

Lychnis apetala.—"New to the flora of China proper."

Saxifraga serpillifolia.—"A very interesting addition to the Chinese flora."

Moneses grandiflora.—"This is the first time the plant has been found in any part of the Chinese Empire."

Veronica sibirica.—"Not hitherto found in China proper."

Cryptogramma gracilis.—"Precisely like Canadian specimens; an addition to the Chinese flora."

Cystopteris montana.—"This is the first record of this fern from Eastern Asia, so far as I am aware. The specimens agree perfectly with Norwegian ones."

Woodsia glabella.—"Now first recorded from China."

In the northern parts of Hainan,—owing, I believe, to local peculiarities, that is, extensive tracts of sand and lava,—the vegetation, though tropical, seldom attains the degree of development one would be justified in anticipating, considering the latitude of the region. The features of the landscape would often correspond more to our ideas of Arabian scenes, where a fiery sun pours down on extensive tracts of semi-arid land interspersed with fertile spots, but where milky Cacti and such-like plants figure most conspicuously. Standing on the summit of the Maangza volcano, and looking around, the country for miles in every direction is a vast forest of Tamarinds and Guavas rising from a sea of lava, a black porous surface absorbing an enormous amount of heat, and pierced in various directions by caverns of great extent and often of marvellous symmetry, resembling those described by HERSCHEL in the lava slopes of Ætna. It is in the interior of the extinct craters, of which I counted 24, that we must look for shade and moisture, together with those plants more specially associated with our ideas of tropical vegetation.

For a generally distributed, varied, and magnificent flora, Chêhkiang stands pre-eminently unrivalled, presenting a combination of luxuriant growth balanced by an equally abundant floral display. A scene in the Ningpo mountains in April is a sight never to be forgotten. One must imagine an unlimited park of handsome trees, whose intervening spaces are filled with choicest greenhouse flowers. The mountains a blaze of Azaleas intermingled with yellow Rhododendrons and Catalpas; copses of Cunninghamia resembling Araucaria, stately Crytomerias, groves of the Wax-tree, *Stillingia*, whose smooth leaves in autumn turn to ruby-red; the rocks festooned with trailing wreaths of pale lilac Wistaria, the

hedges white with Roses, whilst far aloft the trees are linked with Jasmine, and the mountain-tops are carpeted with tiny star-like Tulips.

I will now endeavour to give a brief sketch of the more striking features of the North Formosa flora. Beginning with the sea-shore, we find the sandhills ornamented by the brilliant lilac flowers of an Indian Convolvulus, *Ipomea*, whose runners, measuring sometimes 60 to 80 feet, cross and recross, tending to bind the shifting sand. Close by are hedge-like barriers of Screw Pine, *Pandanus*, rearing aloft their branches like huge candelabra, from which globes of golden fruit depend; the leaves — long, toothed, and rigid—resemble formidable saws; and the roots extend far out into the sand. During the typhoon of the 5th July, the swollen river, as it swept out to the Bar, invaded the more elevated shores, and, carrying away the sand, left the Screw Pine roots exposed in blanched and tangled masses like clumps of macaroni. A little further, and we come to fresh green clusters of a large succulent plant whose white and fragrant flowers with crimson stamens may be scented some distance off — the Indian Lily, *Crinum Asiaticum*,—whilst all around the ground is flecked with patches of the red-flowered Indian Pink, *Vinca rosea*. The fishermen's cots are encircled by groves of *Hibiscus tiliaceus*, a crabbed and twisted tree with large orbicular cordate leaves and handsome sulphur flowers, common in the South Sea Islands. Ascending now the downs, waving amongst the long rank grass, and suggestive of the llanos of Venezuela, are the elongated tubes of the *Lilium longiflorum*, the handsomest and most striking plant in the district. The flowers are white, tinged with streaks of pale purple, measure from five to seven inches, and are beautifully scented. They have their representative in the no less striking golden Lilies of North China, which, in company with deep blue Larkspurs, decorate the rocky fissures of the Shantung Promontory—the most eastern point of China. Passing along towards the base of the hills, there are not many conspicuous flowers: of Roses, apparently only two species, and both white; small clusters of blue but scentless Violets; and at the edges of the slimy marshes, occasionally a

line of Arrowhead, *Sagittaria*, but a smaller species than that which figures largely near the Summer Palace at Peking. We now enter one of the glens which descend from the mountain range; the scene changes, and we find ourselves in what must be regarded as one of the most fairy-like and charming types of Chinese scenery—a Bamboo glen. There are, however, many kinds of Bamboo, and that to which I now refer is not to be met with in full perfection in the north of China. From either side of the path rise these slender forms—smooth, glistening shafts, 50 to 60 feet high: in spring, purple green, and covered with a grape-like bloom; in autumn, golden yellow, and meeting aloft like the aisle of a cathedral; no branches, no roughness, nothing to break the exquisitely graceful curve which at the top unfolds into a canopy of pale green grass-like leaves. In dripping crevices of rocks we find the wax-like flowers of rose-tinted Bigonias growing side by side with the translucent ostrich plumes of the Killarney fern, *Trichomanes radicans*, for we have now reached what is really the distinctive feature in the North Formosa flora, viz., Ferns. That the conditions requisite for producing many kinds of this interesting family were fairly realised, I never doubted; but that within a few miles' radius, and notably in one glen, I should find representatives of most of the tropical and semi-tropical districts in the world, was more than I was prepared for. Without wearying with lists of names, but at the same time to convey some idea of the richness of this locality, I will quote a few notes from previous observations elsewhere. The total number of distinct species of ferns at Chefoo, I found to be about 17; taking a line from Peking to the summit of the Siaowut'ai-shan, *i.e.*, passing over 120 miles and ascending to 10,000 feet, the number was about 27; exploring the caves, craters, and Tamarind forests of Hainan produced 33; the British Isles furnish 45; whilst this one Formosan glen boasts about 60 species, and if the adjacent mountains be included, the list is swelled to over 100. The huge boulders of the glen are swathed in coats of *Hymenophyllum pusillum*, a miniature fan, an inch high, and native of Jamaica; over the rocks climb the snake-like rhizomes of *Poly-*

podium plumula; depending from cracks and crevices may be seen the grass-like fronds of *Vittaria*, a Mexican fern; waving in little groves, the lace-like forms of *Davallia Griffithiana*, of India; winding round the trunks of trees, the tiny, leathery *Niphobolus*, of Java; shading gloomy fissures, the majestic *Angiopteris*, of the Philippines; hanging from lofty precipices, *Pteris Kingiana*, of Norfolk Island; and, towering above all, the palm-like plumes of the Tree-fern, 20 feet high.

But interesting as all these are, there is one in the district which deserves more than a passing notice. When travelling from Kelung to Tamsui on the 17th August, in ascending a long pass in the mountains, I came to a small dried-up torrent bed, descending from what in the distance seemed to be a chasm in the precipice. Leaving my coolies on the path, I struck up the gorge and climbed, struggled, and crawled, till after some time I found myself in a *cul-de-sac*, a sort of rocky shaft environed by perpendicular precipices. Beginning at the base, I traced each plant carefully up and all round, recognising in every instance more or less familiar forms, until at length my eye was arrested by a mass of large coltsfoot-looking leaves, waving backwards and forwards on the edge of a tiny projection, and extending *en masse* to half-way up the rocks. The more I gazed, the more this struck me as being different from anything I had previously met with, when suddenly I distinctly detected a rhizome: it was a fern—but what fern? At once I knew that it could be but one of two. I was up in a moment, and, by dint of hard climbing, reached the lower limit of the mass, where I was just able to haul down a clump of one of the most remarkable of all the known ferns—the *Dypteris Wallichii* of the tropics. This plant is microscopically allied to the extremely rare *Dypteris Horsfieldii*, which was first discovered in Java by Dr. HORSFIELD, who mentions that (during his 14 years' travels all over that island) he found it only in four places. Subsequently WALLACE, when travelling in Malacca, met with it on Mount Ophir, and in his "Malay Archipelago" he makes special mention of it, besides giving a drawing (page 31).

Space will not permit fuller justice to be done to the flora of this interesting district. Suffice it to say that one of the points in which it appears to differ from that of the mainland is in the greater proportion of cryptogamous as well as monocotyledonous plants; in the former especially there is a large field open for investigation, even independent of the great unexplored interior of the island. The following are the names of countries whose representatives I have met with in North Formosa, viz., Mauritius, Ceylon, Hindustan, Java, Australia, Tasmania, New Zealand, Norfolk Island, the Philippines, the Sandwich Islands, Japan, Mexico, Jamaica, Trinidad, and Brazil.

FAUNA.

In consequence of the absence of forest at the north end of Formosa, many animals found in the great central ranges of the island are here entirely wanting. In the savage territory Bears are said to be frequent, Monkeys inhabit the dense forest, and Deer are regularly hunted by the aborigines. The largest animals in the Tamsui mountains are Wild Boars; they are tolerably abundant, but not often seen, as it is only at night that they come out. When traversing the higher ridges of these mountains I have often noticed their marks, where they had rooted up the ground; they inhabit deep gullies and ravines, amongst dense, rank vegetation. Badgers and Martins are met with, and the Pangolin, or Scaly Ant-eater, has been described to me.

In Hainan the latter animal is common, and I have watched it of an evening coming out and feeding in the ant-hills; it measures about three feet in length, is covered with a regular coat of mail, and is furnished with immensely strong claws. The Monkeys on the Maangza volcano measure two and a half feet high and are of a grey colour, but in the south of Hainan there is a jet-black species, with very long arms and tail.

What specially strikes one in the Tamsui district is the scarcity of Birds. Rooks, Jackdaws, Magpies, and Starlings I have never seen, nor even the white-breasted Crows, whose range is

from Peking to Hainan. The large Kites, which enjoy a similar range, are occasionally visible; the most extensive colony of these birds that I have ever seen is on one of the great gateway towers in Peking—the Ch'ienmên,—and in the evening, when the rooks fly home in clouds from the country, where they have been feeding, to the groves of the Imperial Palace, the Kites, which during the day have been hovering about at distances apart over the city, concentrate together as if for common protection. In one of the crowded thoroughfares of Peking I once saw one of these birds swoop down and take a piece of meat out of the hand of a child crossing the street.

All kinds of Gulls, Terns, and Divers are equally rare at Tamsui, though they breed in thousands on the small islands to the north of Formosa. After a heavy north-easter, Snipe and Golden Plover settle on the ground; the peculiar gesture of the latter, when carefully observed, would lead one to suppose that they detect the presence of their food underground by sound. The birds most generally seen are the Drongo, *Dicrurus macrocircus*, and a species of Shrike, *Lanius Schah*. The former is black and shining, with a long forked tail curved upwards like lampwick scissors, and may be seen perched on a conspicuous spray, now and then rising in the air and turning a semi-somersault in pursuit of butterflies and other insects; its most frequent note resembles the rattling together of a couple of flints or marbles. The Shrike is of a russet and grey shade, with black head; like the rest of the tribe, this species imitates the sounds of other birds.*

About mud banks by the rivers in Formosa, especially where these rivers leave the mountains, flocks of small birds, *Cotyle Sinensis*, resembling European Sand-martins, may be seen. Kingfishers, *Alcedo*, frequent the sides of streams, along with a species of Rock Thrush, *Petrocinella Manilensis*, which has rather a sweet note. In copses and shady places one may come across pretty little birds

* The Golden Orioles in the valley of the Hun-ho, west of Pekin, have a note which so closely resembles the mewing of cats that it would be a correct ear which could detect the difference.

of a dull green colour, with white round the eyes, *Zosterops erythropleurus*. Their habits are those of the common Tomtit, *Parus*, and their nests are marvels of ingenuity, oval in form and constructed of the long stiff awns of the coarse mountain grass, and covered with Bamboo leaves, which serve to throw the water off. After the typhoon of the 26th August I found a number of them thrown to the ground, but so perfect was their elasticity that in many cases the eggs were uninjured. The Paddy-bird, or White Egret, *Herodias garzetta*, appears to be rather rare in the district. In the mountains several of the Hawk tribe occur: the Buzzard, *Buteo Japonicus;* the Sparrowhawk, *Accipiter nisus;* and the Kestrel, *Tinnunculus Japonicus;* besides a small variety which would apparently correspond to the Merlin in Britain. One of the most pleasing birds is a species of Swallow, *Hirundo gutturalis;* it differs from the British bird in the marking of the breast, which is speckled grey, but its habits are the same, and nothing reminds one more of home scenes than the way in which these birds fly in and out of the verandah. On the downs one hears numbers of Larks, *Alauda cœlivox*, whose notes resemble those of the common English Lark. The handsome bar-tail Jay, *Urocissa Sinensis*, conspicuous in the glens of Chêkiang and in the woods of Chieht'aissŭ, near Peking, and the blue *Cynopolium cyaneus*, of Wanshou-shan (Peking), I have not met with in North Formosa; on the borders of the savage territory, however, I saw some beautiful little blue birds, which I took to be *Ruticilla fuliginosa*.

Of Snakes there are many kinds, but these reptiles are not so common as one would expect. The *Cobra capella* I have measured three feet four inches in length; this Snake is thick in proportion, of a dull bluish-black colour, and is found in holes in the ground and amongst rubbish. The Chinese in Hainan call the Cobra the "Rice-spoon Snake," owing to the peculiar form of its head when the hood is expanded. The Cobras that I have examined appeared always to be more sluggish in habit than most other Snakes; they are, as is well known, intensely poisonous. Next comes a black and white banded serpent, four to five feet long, also venomous, and

frequenting similar localities; I take it to be the *Bungarus cæruleus*, of Bengal. In dark glens one has to be cautious in laying hold of plants on account of a venomous little Snake of intense pea-green colour, with a large head, and measuring usually about 18 inches long; it lies curled up in such a way as easily to escape observation. WALLACE mentions finding it near Macassar, in Celebes.

The arrangement of the poison fangs I find to be the same in the several species of Snake I have examined, that is, two on each side of the upper jaw, a long one and a small supplemental one behind it, set on cushions. When the fangs are pressed back on the cushions, the poison, in the form of a fluid, is forced through the ducts and may be seen at the tips of the fangs. Besides the above, there are various other species of Snake, one jet-black and very small, whilst another, about five feet long, is marked with longitudinal black and yellow stripes.

So far as I know, Pythons do not exist even in the forests of North Formosa; but in Hainan they are very numerous, being usually from 15 to 16 feet long, and of such thickness that one is a load for two men. Their skins furnish an article of export, being employed for making Chinese guitars. During my residence in Hainan I had a couple, said to measure 15 feet; they were given to me under the following circumstances. The captain of one of the Viceroy's cruisers had them in a large box on board, when suddenly one of them disappeared and could not be found in any part of the ship; a few days after, one of the crew had gone aloft to loose out a sail when the serpent, who was coiled up in the rigging, "spat" at him, and he nearly fell to the deck with fright. A deputation then waited upon the captain and begged him to send the Snakes away, and thus it was that they came into my possession. Their diet was fowls; when a fowl was placed in the box it seemed to become mesmerised, and remained in the same attitude without stirring, but the serpent would never devour it when watched. A fowl would last him for a couple of weeks, during which time he would be dormant. The constricting powers of these animals is remarkable.

In shady recesses of the North Formosa mountain glens a remarkable and beautiful species of Lizard may occasionally be met with. The body is about five inches long and of a dark colour, with light stripes; but the tail is the singular feature of the animal —quite round, glossy, and of the most intense cobalt blue, with much the appearance of a small snake, and resembling those described by WALLACE in the forests of the Ké Islands, near New Guinea.

On the walls of rooms may be sometimes seen the little grey Lizard, called the Chick-chack, *Ptyodactylus gecko*, which lives on flies, mosquitoes, and other insects. It is interesting to watch one, as I have done in Hainan, stealing up to a big cockroach and then making a wriggling rush, and sometimes, from the force of the collision, falling down from the rafters to the floor with a bang, and losing his tail. The name Chick-chack comes from the noise they make, which resembles a sort of sharp chirp.

There are also in Hainan two very curious kinds of Lizard. The first is of a dull grey colour, with a skin like that of a Dogfish, and having a brilliant orange red throat and a crested neck. These Lizards climb up into the Screw Pines, and may be seen at sunrise half asleep, with their tails hanging straight down; their eyes are very prominent, and their habit of rolling them round so as to show the whites, and without moving their heads, gives them a most ludicrous appearance. The second is about one and a half feet long, and of a speckled grey tint, with bright red along the sides. Lizards of this kind live in sandy places, are especially abundant near Poochin, and run with great rapidity, with their necks arched and elevated; when pursued they double like rabbits, so that they are very difficult to capture. The presence of one of these Lizards in the room during a critical confinement is considered to be advantageous, and they are hired out for the purpose.

The Insect pests of North Formosa are not very numerous. There are no Scorpions; Spiders of large size, however, abound. Centipedes have blue legs. Several species of Ants are common; first, the Termite, or White Ant, whose destructive powers are well

known; then the small Black Ant, which swarms in the houses and in mountain glens; and a fierce bull-dog style of Ant, specially inhabiting the joints of the soft downy leaves of the pith plant, *Aralia papyrifera*, and which has a large head and bites most savagely. On one occasion I witnessed the funeral of a large Centipede, *Scolopendra morsitans*, the extended body being borne along by Ants, who supported it throughout all its length on either side; in front walked a few other Ants, but behind they formed a close and regular line about four deep; the procession was altogether about a yard long, and the Ants were of a large species and perfectly black. One of the leading authorities on Ants says: "All species whose manners I have closely observed are quite alike in their mode of caring for their own dead and for the dry carcases of aliens. The former they appear to treat with some degree of reverence, at least to the extent of giving them a sort of sepulture without feeding upon them. The latter, after having exhausted the juices of the body, they usually deposit together in some spot removed from the nest."

Cockroaches are not nearly so abundant in North Formosa as in Hainan, where I have known a swarm to fly into the room suddenly at night, making as much noise as though handfuls of beans were being thrown about. Some of these measured two inches in length. They destroy the backs of bound books, excepting very old ones, and during the night one can hear them at work scraping the surface off. I have also seen a swarm of White Ants arrive during dinner, drop their wings, crawl up one's trousers and down one's neck, drown themselves in the dishes, choke up the lamp, and, indeed, send one to bed as the only refuge available. The Spiders in Hainan measured six and a half inches across the legs and body; by candlelight their eyes may be seen at a long distance, glistening like shining green spots in the rafters. They run about carrying circular egg sacs resembling miniature white-sugared cakes, and measuring an inch in diameter. I estimated the number of embryo spiders in one sac to be about five hundred. In Hainan also I have found Centipedes as long as nine inches, and as

thick as one's finger. They usually have forty-eight legs, each of which is a claw. The strength and ferocity of one of these tropical monsters is something astonishing. Such is their holding power and so great their speed, that the only way to see one to advantage is to place him in a basin; his claws being sharp and hard, like thorns, he can get no hold on the slippery surface, and under such circumstances he whips the basin with his tail, after the style of a lobster. On one occasion I introduced a Centipede, nine inches long, to a small Snake about sixteen inches long. When a short distance off, the Centipede rushed at the Snake, and after sinking his forceps into the flesh of his adversary—killing him at once—and then shaking him, he brought together several of his fore feet, and, concentrating them to a point, remained quiet, while the palpitations of his body, as he sucked the blood of his victim, were distinctly detected. When presently I withdrew him, it appeared that he had bitten a piece clean out of the Snake's body. This Centipede would eat mutton; and when one day he was presented with a full-sized live Scorpion, he killed and ate him at once, leaving nothing but tail and claws. Centipedes for the medicine market are regularly bred in fowl's feathers in Szechwan. A remarkable belief regarding this insect appears to be universal amongst the Chinese; it was first communicated to me in Hainan and afterwards in Peking. It is this: that there is a kind of Flying Centipede, existing somewhere in one of the southern provinces, which, if placed inside one of the ordinary Chinese hollow pillows, will give the sleeper timely notice by rattling inside, should a Snake or robber enter the room during the night.

Many of the Butterflies found in North Formosa are the same as those in Hainan. Butterflies appear to be more abundant at Kelung than at Tamsui.

On the beach in summer, a very curious kind of crab, *Ocypoda*, may be seen. These animals are of an ashy grey colour, with large white claws; they come up out of the sea, and make holes in the sand. Their eyes are very protuberant, and they can see to so great a distance that it is difficult to get near them. The moment they

are alarmed they set off to the water at an extraordinary pace, running on the tips of their toes, with bodies and claws elevated in the air, so that I mistook them for Sand-pipers till I saw them dash into the waves and disappear. In fact, the sight resembled a race of miniature bicyles, and when pursued, these Crabs ran backwards quite as fast as forwards. Along muddy flats one comes across the Jumping-fish, *Boleophthalmus Boddaertii.* This animal is the colour of the mud itself, is about four or five inches long, and has rather the shape of a wedge. The eyes are close together, and in position and setting resemble those of a Plaice. When surprised, these fish proceed by a series of Kangaroo jumps over the mud, and even over the rocks far from the water; and, more than this, I have seen them go down to the side of a small creek and cross it by bounds, instead of swimming, and then climb up the bank on the other side. Sharks, both the common kind and the Hammer-head, are found on these shores; and in the Formosa Channel I have seen Flying-fish. Regarding the latter, it has sometimes been discussed whether they really fly, or whether it is merely a powerful spring with fins expanded which carries them along. Having observed them carefully on many occasions in the Indian Ocean, the Gulf of Siam, and the China Sea, I have no doubt whatever that they do actually fly. In some cases the distance covered equalled 200 yards, I should say; and during the flight I have seen the fish change the direction and proceed at an angle to the original line. The fish of Hainan are far more varied in form and hue than those of North Formosa, and are often of beautiful colours, notably a pale amethyst tint. Poisonous Sea-snakes, *Hydrida,* are sometimes found, averaging about two feet, and covered with black and yellow bands; they are natives of the Philippines and Bay of Bengal.

But if Hainan surpasses Formosa in the number and colour of its fishes, the latter can boast a far greater variety of shells. At Kelung, doubtless owing to the presence of the Kurosiwo current, Sponges, Corallines, and handsome shells are common—some identical with those in the Straits of Malacca—whilst the Sea-urchins, *Echinus,* are of a deep purple colour and armed with

black articulated spines, seven inches long. At night the surface of the water is covered with phosphorescent Animalcula, and the varieties of Zoophytes are numerous and beautiful. Small oysters abound at Tamsui, the mud banks in the river being carefully laid out with long rows of rough stones, with division marks between each man's property; as in other instances where customs in China are the opposite to those in Europe and America, Oysters are here eaten in months not having the letter "R." It is for eating only that they are cultivated.

AGRICULTURE.

Passing round the north coast of Formosa, we find the country between the mountains and the sea consisting chiefly of two kinds: first, a series of downs, or flattened prolongations of the mountain spurs; and, second, narrow winding valleys, the continuation of the glens above. These downs are generally composed of red sandy soil intermingled with clay; a considerable portion is not under direct cultivation, but serves as pasturage for the water buffaloes. Where cultivated, the crops are generally Batatas, or Sweet Potatoes, which furnish, as in Hainan, an important item of winter sustenance, being collected in autumn and piled into store-rooms. The minor crops are Indigo, Ground-nuts, Vegetables, and Ginger, besides large tracts of the coarse mountain grass, which is specially grown for thatching purposes. The tortuous intersecting valleys are devoted entirely to Rice, with occasionally small plots of Caladium. In order to secure adequate irrigation, the terrace system is carried out, and this to a degree of perfection such as I have not previously met with. These terraces, numbering from twenty to thirty tiers, give the narrow valleys the appearance of vast amphitheatres. The main stream is caught at the head of the valley before entering it, and is there divided into two branches, right and left, and carried round either side at the top. When the upper terraces are flooded, the surplus water is allowed to flow down through prepared cuts or apertures to the next tier, and so on down to the bottom, till the whole series is flooded, the effect to the eye

being that of a multitude of small cascades. The plan, so admirable and ingenious, excited the admiration of WALLACE when travelling in Lombok. "It was now that I first obtained an adequate idea of one of the most wonderful systems of cultivation in the world, equalling all that is related of Chinese industry, and, as far as I know, surpassing in the labour that has been bestowed upon it, any tract of equal extent in the most civilised countries of Europe."

In Tamsui, as elsewhere in China, Rice is the mainstay of the population. Two crops are raised here in the year; in 1881 the first was gathered in June. The Rice harvest changes the aspect of the country in a very remarkable manner; when the grain is ready for cutting, the landscape has the appearance of acres of vivid green meadows; suddenly this disappears, the fields are ploughed up, and the country resembles mid-winter in Europe. This is during the first half of July. Then the scene shifts once more, and all around is a vast lake of muddy water, barred and interlined by the narrow pathways between the fields. The mode of setting the Rice in North Formosa is much the same as that in Hainan, and is as follows. There are certain little nurseries, say forty feet long and twenty feet wide, of carefully prepared mud; over this surface the Rice seed is thickly scattered and allowed to germinate; in a short time, under the rays of a powerful sun, the appearance of such a plot is that of a large billiard table of intense green. When the sprouts are about ten inches long, they are pulled up, tied together in little bunches like asparagus, and the tops clipped square. Taking a basketful of these, the people go into the rice-field, which is a narrow winding track of water like a canal, and about half knee deep; the planters then stand in a row at distances of several yards apart, and each taking a bunch in his left hand and beginning at his left, plucks out a few stalks and sets six rows at a time, at about a foot apart,—one bunch or handful serving for more than sixty settings, so that a field is very quickly covered. The ploughing is done entirely by water buffaloes.

Generally speaking, I should say that the system of agriculture in North Formosa is inferior to that of the other parts of China

which I have visited,—for instance, the Ningpo district, where crops of all kinds seem to be more closely attended to, and various kinds of manure are brought into requisition. In Formosa, Sweet Potatoes are set in March—the seed employed being old tubers—and carefully manured with wood ash, and hoed every month to prevent the suckers from taking root; the young seedlings, which appear in April, are cut off and set out to form new plants. The runners, which attain a length of 10 feet or more, are used as fodder for the cattle, and the crop is gathered during September and October; rotation of crops does not appear to be observed. Ginger also is set in March, old roots being used, and watered with liquid manure, the crop attaining maturity in November. Many shady spots in the Tamsui district, especially round the flanks of the hills, are ornamented by groves of Betel palms, which impart a peculiarly tropical aspect to the country. At twenty-five years old they stand from 30 to 40 feet high, though the stems, which are of a pale grey colour, average only about five inches in diameter; the tree bears fruit when eight years old. The fruit is much consumed by the inhabitants. Sometimes in the same enclosure stands the Orange tree, which, when in fruit, presents a pleasing contrast to the *Areca*, with its smooth straight shaft. These Oranges have generally a coarse thick rind, and the trees measure from eight to ten feet in height, and are much larger than those I have seen in the Foochow district. In picturesqueness they are inferior to those in the south of Spain, where the trees are so high that I recollect noticing at the town of Palma, near Seville, that only the church tower was visible above their tops.

Proceeding into the alluvial plain of Banka, we find the river flowing between extensive tracts of Sugar-cane, the view reminding one of the scene in the plain of Pechili in August, when the Peiho winds through miles of *Kaoliang* 10 to 12 feet high. In the Tamsui district there seems to be only one main Sugar crop in the year, and the violet cane appears to be as common as the white (Otaheite). The amount raised is inconsiderable, and therefore principally consumed in the district. The Hainan cane struck me

as being of a deeper purple, and as having more body and less leaf; this may be due to the soil, as well as the extreme heat and the system of manuring. There, two crops are raised in the year; long furrows are made in the ground, and filled with lime, cow manure, and mould; the heads of old plants are then laid in the furrows and covered over with a thin layer of earth. Should there be rain shortly after, the crop will sprout at once, but should there be a drought of two or three weeks, a great portion will probably be lost. The above is the system of manuring adopted in the district of the volcano, where the Sugar is grown at the edge of the lava flow, but in the country round Kiungchow (Hainan), bone ash, ground-nut cake, and street sweepings are employed. The cane, when cut, is carried straight to the mills, or if the weather is wet, it may be stored for a while. Outside the city of Kiungchow the Sugar hongs have receiving offices, to which the planters bring their Sugar to be packed and conveyed to Hoihow for shipment. The crushing mills are in the country; the proprietors sometimes merely crush for growers, and buy and crush on their own account as well, but generally speaking, they are also themselves producers.

In the matter of fruits, North Formosa compares unfavourably with Hainan, the principal, besides Oranges, being Pumeloes, Lung-ngans, Guavas, and Pine-apples; whilst, in addition to these, Hainan affords Mangoes, Jack-fruit, Custard-apples, and Lichees.

The Tea cultivation in North Formosa is chiefly confined to the hills, and perhaps the first thing that strikes one is the variety in the style of cultivation and the good fortune of the growers, who get such large returns for such small original outlay. Although a good deal of Tea is grown within three miles of Tamsui, the main centre of production is in the hills some 20 miles to the south. The soil there is generally a kind of reddish-yellow, sticky clay, in wet weather resembling cream, and extremely slippery; this is on the lower and middle slopes. The soil of the upper slopes is inferior, and these slopes are often so steep that it is difficult to understand how the people climb them, to say nothing of tilling them. In the matter of climate, Nature has done everything for Tea in Formosa,

and man in his department has not much aided her. The most favourable conditions for its cultivation, as laid down by the highest authority (Lieutenant-Colonel MONEY, to whom was awarded, in 1872, the gold medal of the Agricultural and Horticultural Society of India, for the best essay upon the cultivation and manufacture of Tea), are here largely realised. "The climate required for Tea is a hot, damp one. As a rule, a good Tea climate is not a healthy one. The rainfall should not be less than 80 to 100 inches per annum, and the more of this that falls in the early part of the year the better. Any climate which, though possessing an abunndant rainfall, suffers from drought in the early part of the year, is not, *cæteris paribus*, so good as one where the rain is more equally diffused. All the Tea districts would yield better with more rain in February, March, and April; and therefore some, where fogs prevail in the mornings at the early part of the year, are so far benefited."

Everywhere one is struck by the amount of new ground which is being broken up in order to set more Tea. The first thing is to clear away the long grass and brushwood, cut down what trees there may be (I speak more particularly of the hills on the borders of the savage territory), stub up the roots, make bonfires, and plant Indigo. When this plant has run for a while, it is replaced by Tea. As to the mode of setting, the Formosa plan differs from that followed in the other Tea districts I have visited. Here a considerable amount is propagated by means of slips or cuttings as well as by seed, and no manure is used; whilst in the Ningpo and T'ient'ai districts (Chêhkiang), seeds alone are employed. In Chêhkiang several holes are made, and five or six seeds are dropped into each and covered up, and liquid manure or wood ash is laid on. During the following three years the ground is carefully weeded and manured; at the end of this period, the young plants are separated out. If carefully tended and pruned of the old wood, a bush will last many years. The first picking takes place generally in February, and the second in May. A good bush will yield about one catty, and in this respect Formosa Tea is about the same. The soil in the particular district referred to I found to be light

and friable, a mixture of sand and vegetable mould. The plants are subject to a blight in the shape of a small worm. In the Ningpo district the most luxuriant Tea is that of the alluvial plain; it is grown between rows of mulberries. But by far the finest Tea I have ever seen is that in the T'ien'ai district, in the province of Chêhkiang. In September, 1877, I made an expedition to the celebrated T'ient'ai-shan, about 100 miles south of Ningpo, where I stayed in a monastery at 3,000 feet above the sea, and had ample opportunity of studying the cultivation of Tea in that district. The soil is light and sandy, and corresponds a good deal to that of the Bohea mountains, as described by FORTUNE. The following is the method of cultivation adopted, as communicated to me by the abbot, whose plantations surround the monastery. Pieces of Bamboo, say six inches long, are stuck into holes in the ground, and about 15 seeds put into each tube. The tubes are then filled up with earth; this is in September. In the following June, some of the seeds, having germinated, appear as small plants at the top of the bamboo, which is then removed. The growth is at the rate of about four inches a year, and the first picking takes place four years after setting. There is only one picking in each year, in April; but lower down on the mountain, the first takes place when the plants are three years old, and there are as many as three in the year. Owing to the elevation, the winter is sometimes severe, and at the end of autumn the ground between the Tea plants at the monastery is ridged and covered with straw. The plants are not considered to have attained maturity till 10 years old; they are never changed, but from time to time the decayed wood is cut away. Like those in the Ningpo district, they are liable to the attacks of a small worm. The abbot attributed (and I suspect correctly) the superiority of this Tea, which sells at nearly three times the price of the best Ningpo, to the prevalence of fogs on the mountain. His gardens, which are not arranged with much symmetry, are enclosed in groves of Bamboo, Cunninghamia and Rhododendron. The Tea plants themselves are bushy and luxuriant, averaging from two to three feet high, but some are certainly from four to six.

The bark of the trees and the stones in the vicinity are covered copiously with moss and lichens, bearing testimony of the moistness of the climate. In the Formosa Tea plantations, little attention appears to be paid to drainage. On the steepest slopes, the furrows, instead of being run in a slant, are generally carried horizontally, in consequence of which a more direct barrier is placed against the descent of water during heavy rains, so that in some places, where the soil is stiff, the water lodges, whilst in others the soil is swept away. So thoroughly is this the case in one plantation known to me, that the Tea plants resemble mangroves, the roots being so completely denuded of earth that they stand like rows of screw-pile lighthouses. An unweeded Tea garden is about as slovenly a sight as one would care to look on, and we may truly say, "things rank and gross in nature possess it merely," for here, at any rate, what with heat and moisture, "idle weeds are fast in growth"; do what you will, if you once let them get a good start, it will be very difficult afterwards to eradicate them. I know another plantation where the bushes are almost smothered in grass and ferns; not that it is abandoned, but simply that the owner is too lazy to pull out the overgrowth.

As to the distances apart at which the plants are set—a matter which receives some attention in India,—it varies a good deal; the closest I have found to be thirty inches, which allowing for the spread of each bush and the necessary ploughing between the rows, is about as close as practicable. But the greatest mistake is that of laying out too much ground, because this simply implies so much additional labour, not only to keep things going, but to keep the weeds down, and a badly weeded garden means less Tea per bush and deterioration in quality. The truth, however, is that the virgin soil of North Formosa is so rich and so well adapted for the growth of Tea that many of the precautions which in other places have to be attended to, may here, for the present at any rate, be disregarded with impunity. The quality of the soil in the Tamsui Tea districts closely resembles that in some of the best Indian districts, for, as Colonel Money says, "a light sandy loam is perhaps as good a soil as

any out of the Himalayas. It ought to be deep, and the more vegetable matter there is lying on the surface the better. If deep enough for the descent of the tap-root, say three feet, it matters not much what the subsoil is; otherwise a yellowish-red subsoil is an advantage. This subsoil is generally a mixture of clay and sand. Much of Assam, Cachar, and Chittagong is as the above, but as a rule it is richest in Assam, and poorest in Chittagong." Whilst in the Ningpo district there are only three pickings in the year, the advantages of soil and climate in Formosa are such that there are often no less than seven, the first three being always the best.

CLIMATE.

The climate of North Formosa differs widely from that of the mainland opposite, principally on account of the Kurosiwo current, a branch of the Pacific equatorial current, which, striking the south end of the island, flows up along the east coast, and so on towards Japan. The mean annual temperature of the water is about 80°, and during the winter the cold northern blasts, coming in contact with this stream at the north end of the island, cause the warm, moist atmosphere above it to condense, and when, in addition to this, the lofty mountains are taken into consideration, an explanation is afforded of the constant rainfall which characterises the winter. It frequently rains for many days together; the mountains are hid and the ground saturated. It is, however, the continuity of the rain which makes up the large total, the actual quantity which falls on a given day being much less than in many drier climates. The rain is more of the nature of what is known as Scotch mist, or mountain rain. Occasionally there are spells of beautiful weather, with a clear atmosphere, but ordinarily the sky is of a leaden grey hue; and the appearance of all things during the regular "north-easters" is dreary and cheerless in the extreme.

As to the temperature in winter, the thermometer does not often fall below 50°; during such blows I have just referred to, 53° to 55° is a common figure; on the other hand, during fine winter weather, when the sun is not hid, English summer heat is registered. On

Christmas Day, 1881, the country wore the aspect of May in England, the thermometer showed 73° in the shade, and all round the birds were singing. The forest-clad mountains in the distance, from 4,000 to 6,000 feet, may be seen crested with snow, but this is seldom the case with the Tamsui range. Not unfrequently, when the latter is hid in clouds, and it is raining here, fine weather prevails in the Banka plain, simply because these mountains act as a barrier, and condense the moisture before it reaches the plain.

Both in summer and winter a strong east wind is generally accompanied by fine weather. During the south-west monsoon the sky is clear and blue, and covered with cumulus clouds, and a complete wet day is of rare occurrence. Thunderstorms at Tamsui itself are not very common, and when they do occur, are not specially violent; but sometimes towards evening the clouds bank up in the south-east, the wind drops, the sky is black, and thunder rolls in the mountains. This phenomenon, however, is more striking in Hainan. At Hoihow, during the summer, thunder is heard nearly every day between two o'clock and four o'clock, and the storm may be traced passing along the ridge of the Maangza volcano, and on out to sea and across the Hainan Straits. The amount of rain which sometimes falls in Hainan in a given time is prodigious, and is perhaps not to be wondered at, considering that the latitude is that of Cuba. On one occasion I witnessed a steady downpour for 200 hours; houses collapsed, the country was submerged, the streets were turned into canals, and the river Limu, frothed and foaming, and carrying with it trunks of trees, wreckage, and *débris*, swept out to sea with such force that during the entire period of eight days all communication with the anchorage was at an end.

In regard to summer temperature at Tamsui, whilst the thermometer often rises to a considerable height, the heat in the house is not, as a rule, so great as in various ports on the mainland. The thermometer seldom shows 90°,—84° to 86° being about the average day temperature. Houses by the edge of the river, however, where there is not much air moving, are hotter; for instance,

the temperature of the Custom House during the summer of 1881 was pretty steadily 88° to 89° in the afternoon. But in this respect the climate of Tamsui is infinitely better than that of Hainan, as will be seen by the annexed table:—

TEMPERATURE in the HOUSE at HOIHOW (HAINAN) during Six Months of the year 1878.

DAY.	MAY	JUNE	JULY	AUG.	SEPT.	OCT	DAY.	MAY	JUNE	JULY	AUG.	SEPT.	OCT.
	°	°	°	°	°	°		°	°	°	°	°	°
1	93	89	93	92	92	84	17	90	95	92	91	87	80
2	92	86	93	91	93	85	18	89	93	92	88	87	81
3	88	87	94	93	93	85	19	87	94	92	89	87	82
4	84	90	94	90	90	86	20	89	94	92	90	87	84
5	84	92	94	91	88	86	21	91	92	92	91	88	84
6	83	93	95	90	90	86	22	93	92	87	92	88	84
7	87	93	95	88	91	86	23	94	94	89	91	87	84
8	88	93	94	87	92	82	24	96	94	92	91	86	84
9	91	92	93	88	92	81	25	96	95	90	90	83	83
10	92	88	93	87	88	81	26	96	94	90	91	86	83
11	92	88	93	88	85	83	27	94	94	91	91	85	83
12	92	88	93	86	86	83	28	93	94	89	92	86	83
13	93	89	93	87	87	82	29	94	94	91	93	85	78
14	88	87	93	86	83	82	30	93	94	91	93	85	78
15	87	88	90	87	86	81	31	93		91	92		78
16	89	91	91	91	87	80							

The nights in Hainan are very oppressive, as may be inferred from the fact that on the 9th October, 1878, I required a sheet to cover me for the first time since the 15th April previous.

There are days in North Formosa which may be considered almost perfect, when the sky is serene, the sea deep blue, and the mountain outlines are sharply cut against the sky. The tints, it is true, are not equal to those of the Mediterranean and Sierra Nevada, and the sun moreover, is always powerful; on the other hand, there

are never those sudden and startling changes of temperature which are met with in more arid climates.*

In Formosa typhoons may be looked for between June and October. Their occurrence is irregular. In 1881 there were four, of different degrees of intensity, the most violent occurring on the 26th August. On the afternoon of the 25th, all the indications of a typhoon were to be seen: the day was dark, gloomy, and wet; the thermometer 84°. The sky at sunset wore an extraordinary and sinister aspect; the sun itself was not visible, but the atmosphere over the sea was of a lurid yellow colour, as though reflecting a distant conflagration, and rain was falling; there was a solitary flash of lightning and a clap of thunder, the wind coming from the N.E. During the night the wind came in irregular and violent gusts, and the glass fell steadily. Towards morning the wind increased, going round to the E.N.E., and so it continued till 11 a.m., when the typhoon was raging; at 3 p.m. the scene was something fearful. To speak of rain conveys no idea whatever; it seemed as though masses of steam were being swept along the ground, now and then completely hiding objects 50 or 60 yards off. From the corner of my verandah, the house being barred and barricaded, I saw the Chinese military barracks destroyed; 20 soldiers, too ill to escape with the rest, were killed amongst the ruins where they lay. The surface of the river was lifted bodily in sheets and thrown on the land. The noise at times was appalling. It seemed as if the very earth were going to be torn to shreds. The river was estimated to be running at 11 knots, and a steamer of 500 tons, moored to a buoy calculated to hold a ship of 1,000 tons, although steaming full speed ahead, dragged the buoy down the river till she had to let go, and was beached and made fast to the trees. But what language could describe the sea? The Bar resembled a wall of water cragged and torn, and as the huge

* On the 1st July, 1876, when passing through the mountains some 70 miles west of Peking, I was overtaken by a thunderstorm, when an absolutely dried-up watercourse was speedily turned into a seething torrent, and in twenty minutes the thermometer fell from 92 to 70 degrees.

rollers advanced, the typhoon, meeting them in front before they could tumble over, would blow them up in spouts and sheets of water. During the full fury of the storm a junk was seen drifting down the river and out to sea, with one old man on board—the picture of despair—and no one able to aid or rescue him. He had been previously warned to leave his boat and come ashore, but remained obstinate until it was too late. Next followed another junk, with 18 men on board, sweeping out to the Bar. Some spectators said that they saw the poor fellows trying to hoist their sail, but no one among them lived to tell the tale. The vessel was smashed to atoms in a moment, and not a vestige of either her or her crew was ever heard of more. During this storm pieces of the river bank, bushes, timbers, and wreckage, and even snakes, were seen drifting swiftly out to the Bar. At Banka the river rose 20 feet, junks were cast up into the sugar-cane fields, the country was inundated, an island was submerged, and the inhabitants—300 people—were swept away.

PIRATES.

The fishing population round the coast of North Formosa are generally quiet and inoffensive, and in style and appearance bear a marked contrast to the crews who man the vast fleets of fishing-boats one sees when passing along the coast of China, notably between the Chusan Archipelago and Foochow, many of whom are nothing less than pirates when occasion offers. It is many years since any acts of piracy have been committed in these parts; the bleached bones of the last batch of pirates are to be seen, I believe, in the sand hills near Kimpaoli. In this respect Formosa has the advantage of Hainan, where not only does piracy still flourish in the less frequented parts of the island, but close to the Treaty port itself.

THE SAVAGES.

Several accounts have from time to time been written concerning the savages of Formosa, their ceremonies, customs, etc.,

accompanied by lists of words and phrases. Such, however, have been principally derived from the south of the island, in the neighbourhood of Taiwan-fu, where the natives would seem to have been more accessible than in other parts. Various opinions regarding their origin have been put forward; that they differ widely from the indigines of Hainan there can be no doubt. One eminent authority refers the latter to the Cochin-Chinese family, and the Formosans to the Polynesian. On this point I am not competent to offer an opinion; but a short sketch of personal experience derived from a visit to them in their native forests may not be altogether uninteresting. Often when walking over the Tamsui mountains I looked in the direction of the lofty forest-clad ranges of the aborigines, a mysterious and unknown region. From various sources I learned the following facts: first, that some of the savages come out to the border to barter with the Chinese; secondly, that in consequence of the encroachments of the latter on the edges of the forest, seeking camphor-wood, etc., encounters frequently take place, or rather that the Chinese, when engaged in cutting down the trees, are surprised by their wary antagonists and killed, and their heads cut off and carried away as trophies; thirdly, that these acts are not always done by the savages of the particular place where they occur, but by others brought from a distance for the purpose; and fourthly, that anyone entering the forests and coming upon the savages without previous warning would almost certainly be killed. These particulars were not specially encouraging to one desirous of exploring their fastnesses; however, I decided to endeavour to get a look at them outside, at some bartering place, and thus perhaps gain additional information regarding their habits and customs.

On the 10th February, 1882, I started from Tamsui, steaming 10 miles up the river to Banka, where I proceeded to purchase such articles as I thought might find most favour as presents. From Banka I went south and crossed the plain till I entered the mountains at Sintiam. The situation of this place is very pretty; the river a few hundred yards up is a brawling mountain stream, which,

after passing over a rapid, flows smoothly in front of the village under the base of rocks projecting, like the buttresses of a cathedral, into clear green water 50 feet deep, whilst, reaching far up behind, the hillside forms a canopy of hanging wood interspersed with miniature bamboo dells.

Ferrying over the rapids, I traversed a stony tract of waste land, which is submerged in heavy floods, and then crossed the river again, and, ascending a hill 500 feet high, devoted entirely to tea, dropped down into a small semi-circular shut-in valley, and put up at the village of Kochu.

A few years ago the river at this place was the boundary between the savage and Chinese territories, and although a few tea plots are now established on the other side, it was only last September that a Chinaman, while at work, was surprised and killed by savages who crept over the hill from the back and shot and beheaded him within half a mile of Kochu; whilst at another spot rather more than a mile off, five days before I arrived, three Chinese had been pounced upon, and their heads cut off and carried away. By the side of the river is a curious little hamlet perched on the summit of a mound-like hill; this place was attacked a few years ago by 50 or 60 savages, but the inhabitants were able to defend themselves, and beat them off.

My object now was to find a Chinese go-between, and induce him to bring out some of the Natives for me to see. Hearing that such a man was to be met with further up the river, I started for his cottage. The path lay by the side of the water, which was fast becoming hemmed in by mountains which descended in perpendicular precipices, so that the only footing to be had was cut out of the rock, in the style of paths in the Andes; a little further on and the river had to be crossed, and then the walking was along the face of a smooth rock—the base of a mountain which shot down at a steep angle to the water's edge. Along this was a crack which served as a path, allowing in some places almost the width of one's foot; but hat, coat, and boots had to be dispensed with, and it became necessary to claw the rock with both hands and edge along, picking

one's steps with care, as the river below was swift and strong. At length, after a good deal of scrambling, I reached fair ground, and mounting a very steep hill, came to the cottage of the go-between, and set to work negotiating.

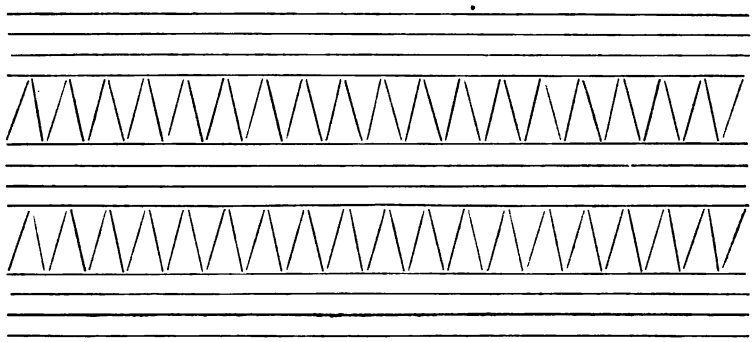
It was arranged that he should bring out some savages and I would give them a feast of pig and samshu (their special fancy) at the bartering-house by the river. My friend forthwith changed his clothes and put on a striped tunic of savage cloth, tied on a huge knife, and threw round his neck a gay arrangement of coloured beads, from which hung shot and powder pouches and all the necessary paraphernalia for the long-barrelled matchlock which he had taken down from its rest on the wall. He was now transformed into a typical "Hawk-eye," and having lit his fuse, he sallied forth, passed over the mountain by a winding path, and disappeared. This was in the morning.

At about half-past five in the afternoon there was a cry from the door of the cottage where I had remained, "They are coming!" and going out to see, I beheld three men and a girl slowly ascending the path from the river, "Hawk-eye" having preceded them and laid aside his gun. Five of the savages had originally started to come out, but hearing the roaring or howling of a bear in the mountains as they journeyed, the fifth considered it a bad omen and had returned home. As the party came up, carrying their spears—long bamboos with iron heads,—the Chinese shouted to them in an overbearing manner to leave these weapons outside, and they were stuck into the ground before the door. As they entered, I bade them sit down. Two of the men were old—one was a chief; the girl might have been about 20. As to their dress, it was pretty much the same. The men wore a long piece of cloth like bed-ticking, which was suspended from the shoulders and simply tied in a knot and left open in front. Round the waist was a girdle of blue material, also tied in a knot in front. Their legs were entirely bare. On the head was a curious close-fitting bowl of wicker-work of dark colour, resembling an inverted slop-basin. Their hair was quite black, and hung in copious locks round the neck; their com-

plexion was light olive, and in the case of these three the profile not specially pronounced. Their expression was by no means unpleasant. The girl was on a somewhat large scale and rather Egyptian in face, putting me in mind of the bas-relief on a mummy coffin. Her dress resembled that of the men, but there was more of it; she wore, in addition to the hanging toga, a sort of *sarong* in picturesque colours, extending from the waist almost to the knee, and a pair of regular mocassins. Her hair, which was quite black, was not long, and was tied up with a string behind in one place; her ear-rings were very curious—a couple of pieces of carved bamboo, thicker than a pencil and about an inch long, thrust through the ears, and holding suspended little strings of blue glass beads and flat bits of white ivory. As the sun was going down and the river had to be crossed once more, I took my departure, having arranged that the savages were to be brought in next day to the bartering-house by the river.

Early in the morning the first thing to be done was to purchase a pig; and having accomplished this, I moved on to the samshu shop, where a big crock was placed on the floor, and the shopman began to ladle out the stuff at a rate which rather astonished me, as though the savages wanted to wash in it. "Oh," said the Chinese, "that's nothing; they drink it like water." I confess the article was not very deadly, so that I paid my dollar and completed the purchase, despite my qualms about giving 29 catties weight of samshu to four savages. Arrived at the rendezvous, I found not only my four friends of the previous evening, but eight more, to whose savage ears the rumour of roast pork had penetrated far in their mountain fastnesses, so that now I had a goodly show of 12 for inspection and comparison. Having set myself by the door, as the house was rather dark, I ranged them all in a row in front on benches, so as to obtain a good view. The first thing that struck me was the great variety of type. One girl of about 22 was not only good looking, but of dignified and graceful mien, and for dress and style the personification of Miss BATEMAN in "Leah;" olive complexion, large and beautiful

eyes, long eyelashes, and a remarkably well-formed nose. On her head she wore a picturesque dark turban embroidered round the edge in red; her ear-rings were the same as the other girl's, but her general style was superior. The tattooing, strange to say, seems not to disfigure these Natives—in fact, it rather adds piquancy than otherwise. The pattern is the same in all, and may be compared to a pale blue gauze band or ribbon, starting in front of the ears and passing down in a slope to the corners of the mouth, where it divides, half going over the top and meeting under the nose, and half passing under the lower lip and meeting on the chin. It measures 1⅝ inches wide; the edges are each made up of four longitudinal lines close together, and the centre of the band is the same, the intervening spaces being filled up with simple zigzag lines, thus:—

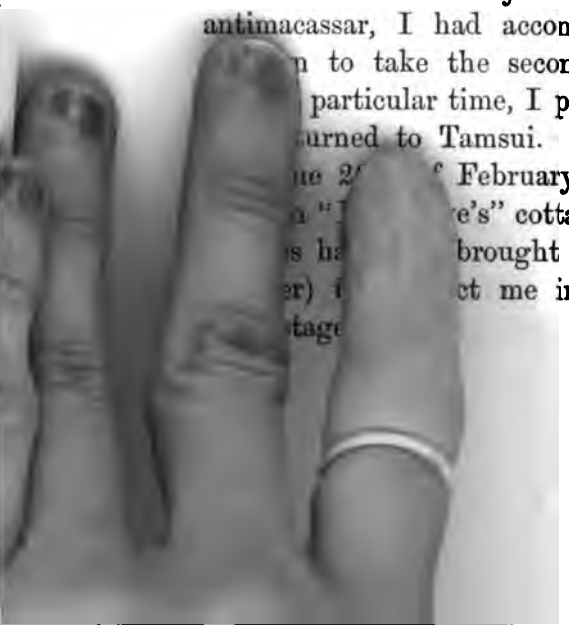


The tint is pale blue. The men do not have anything at the sides, but merely a narrow band down the centre of the forehead about half an inch wide, and consisting of horizontal lines close together. This is not worn until the individual has accompanied a party on a raid against the Chinese; and when, afterwards, he has himself killed a Chinaman and brought home his first head, a similar band is added to the chin. Excepting the youths, all the gentlemen present had this badge, but exactly how many Chinese each had slain I did not learn.

After a number of questions, I ordered the samshu to be brought in and placed in the centre of the floor. This was done,

...k and the samshu handed
...ach other. There were two
...they put their heads close
...ther's necks and drank
... After we had spent some
... I noticed that the eyes
...to the door, where the
...suddenly the savage arose,
... which was bound),
...couple of logs which
...ground. The whole
...and crowded round.
...and carry hideous
...holding the
...the hollow below,
...hot water, but
... the chief proceeded
...he presented
... Then the
...going down.
...heavy strokes
...the measure
...draw a veil.
...into which
...roaring fire
...dress. Mean-
...in a circle by
...pressing in their
... At last the
...on a
...themselves with
...the men
...just as the
...they
...stages slow

down the river. The sight was an interesting one, and a vivid picture from "The Last of the Mohicans;" the wild forms and varied attitudes, all in true savage costume, passing along under the shadow of the dark rocks. I of course at once went down to the water's edge to receive them, and undisguised indeed was their astonishment at being helped ashore by me. If there had been variety amongst the first batch, there was still more in this one. One young fellow in particular attracted my attention; he might have been 26 years of age, and was of singularly sinister and forbidding mien. His head was ornamented by a crimson cincture, and he wore, besides, other gaudy articles, and was evidently the head of the party. As I learned later on, he was the brother of the chief of the tribe. His displeasure on discovering that the pig was already devoured was ill concealed, and his manner was correspondingly haughty and abrupt, till a happy thought occurred to me, and I lost no time in investing him with the Order of the Antimacassar, the only present I had at my disposal after having given the chief a pair of bathing drawers. Then I sent out and bought a dollar's worth of brown sugar; this I had made up into little bags, and presented each of the new-comers with a parcel, so that everyone was mollified, and all went merry as a marriage feast. Before taking my leave of the assembly, I told "Hawk-eye" to ask the chiefs whether they would allow me to visit them in their forests; this being communicated, they nodded assent, and I had the same question put to the rest. I now considered that, thanks to the instrumentality of those valuable articles, a pig and an antimacassar, I had accomplished the first step, and was in a



n to take the second. Being unable, however, to remain particular time, I put off the proposed visit for the present, urned to Tamsui.

ne 2 February, early in the morning, found me once a " e's" cottage preparing for the expedition. Four s ha brought out the day before, two (the chief and er) ct me into the forest, and two to be retained tage

"Hawk-eye" and the savages having loaded their matchlocks and lighted their fuses, I buckled on my trusty steel (a savage knife, 19 inches long), shouldered my gun, and off we started from the midst of an admiring throng. First went the chief, I came next, then "Hawk-eye," then my servant, and the other savage brought up the rear. The path at once began a steep ascent, winding along some very awkward places; at one spot the recent heavy rains had washed away one half, and I had once more to claw the rocks. At length, after a tough climb, we gained the top of a ridge, and there beheld a sight indeed; mountains all round in every direction, those in front one dense mass of forest. The day was gloomy; heavy banks of dark clouds brooded over the ridges, forming a kind of pall, and the forest looked perfectly black. We were standing on the outskirts of civilisation, had passed the last patches of indigo, had seen the last sod of virgin soil that had been turned, and now we had to descend and enter the wilderness. By degrees the path, which hitherto had been little to boast of, became small and beautifully less, and at last jungle appeared—masses of reeds, grass, and other plants 10 to 15 feet high, and as dense as a wall. When approaching this place the chief blew a small reed whistle, and then raised a peculiar and melancholy wail, which resounded through the forest. The object of this was to let the other savages know who it was that was coming. The path got worse and worse; for me, with boots, it was a round of slipping, sliding, and scrambling, and nothing to lay hold of except the stalks of reeds, which cut like knives. Moreover, the chief walked at such a rate that it was as much as I could do to keep my eye upon him; it was a springy bounding step, with the body bent forward and eyes constantly on the trail. Presently the jungle ended, and after an unusually steep and tough descent, we came to the bottom—a vast deep mountain glen,—where

> "Broken by stones and o'er a stony bed
> Rolled the loud mountain stream."

I now for the first time stood in the forest primeval—a sight never to be forgotten. Wherever the eye wandered, trees of various forms

and sizes, all in full foliage, seemed banked up against the mountain sides. In some places, such was the angle of the escarpment that it was evidently a precipice; yet not a trace of rock was visible. Conspicuous before all, magnificent camphor trees reared their shapely branches, clothed with glistening green leaves. I saw clean-stemmed liquidambars and a host of other trees unknown to me; and under their shadow, in dark interstices, rose, like feathery palms, tree-ferns 20 to 30 feet high, whilst close beside were dense clumps of smooth-bladed bananas. The ground below, reeking with steamy moisture, was one mass of luxuriant semi-tropical vegetation. Except for the sound of the mountain river, all was silent; no birds visible; no signs of life except some white and speckled butterflies dancing over the surface of the water in the dark glades. Here we sat down, and "Hawk-eye" changed his garb entirely, and donned complete savage costume—the toga, girdle, and skull-cap,—so that but for the tattooing he was a savage.

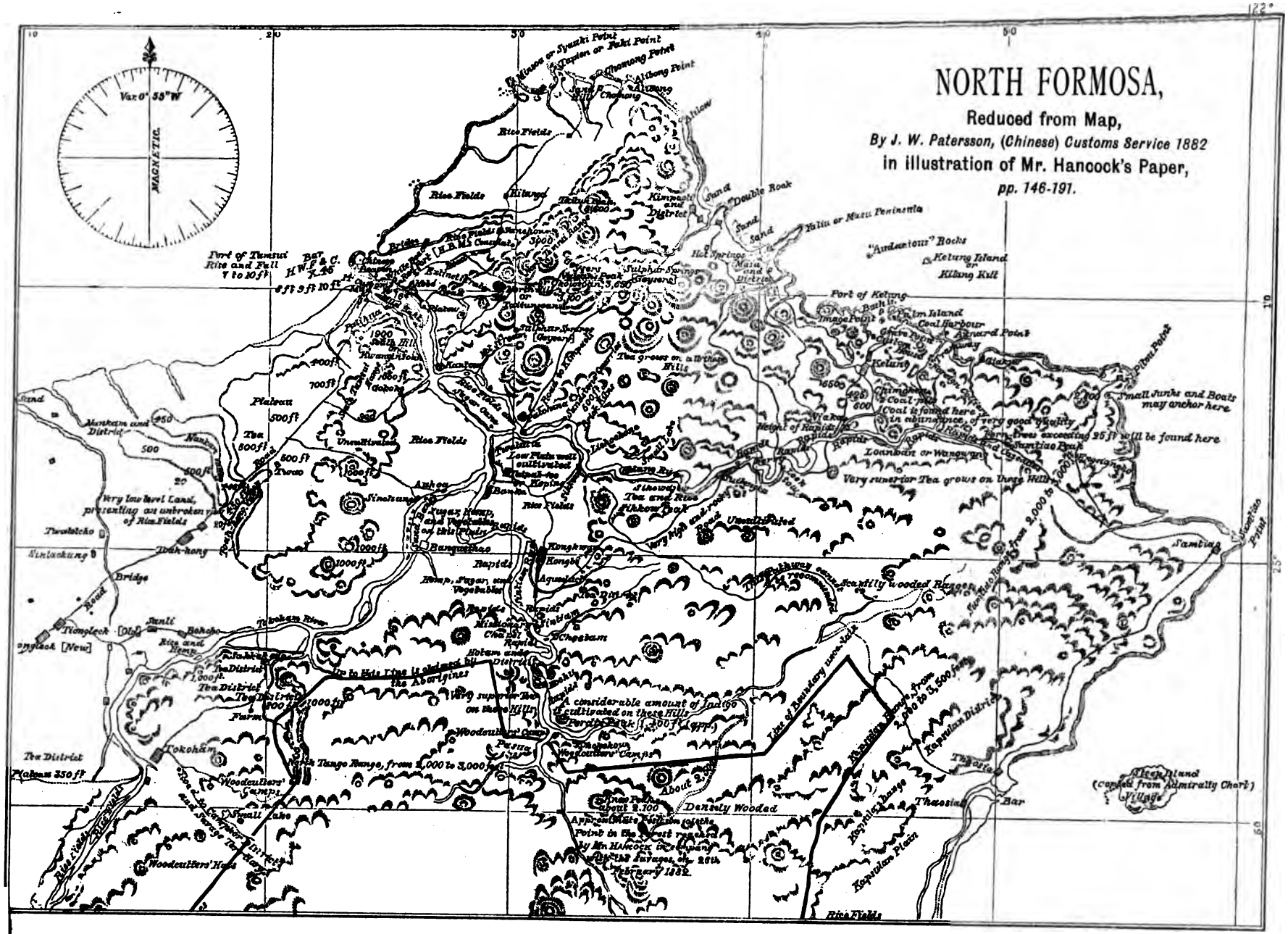
It was up this mountain river that our course now lay, and it had to be crossed and re-crossed repeatedly. At first I was carried over, but at last, like the rest, I simply walked through. Sometimes we passed under overhanging banks of dripping moss, then over huge boulders, and again, leaving the river, through tracts of jungle, which the savages slashed with their knives, whilst occasionally I would come upon some exquisite botanical treasure, which I had just time to snatch and throw into the basket. Sheets of ferns (pellucid green *Trichomanes* and *Hymenophyllum*) encased the trunks of trees like wreaths of emerald lace, whilst far aloft depended orchidaceous and other epiphytic plants; in the forks of branches, huge shuttlecocks, six feet high, of *Asplenium nidus*, or the birds'-nest fern of the tropics; and reaching across from tree to tree were cords and cables of rattans and various other creepers hanging in long festoons. At last we came suddenly to the foot of a steep buttress, up which we had to pass in zigzag, holding on to the trees, which I noticed were now getting thinner; more light was visible, and something resembling signs of a path. We were now close to our goal, and the savages told us to sit down till the chief should

go on ahead and give notice to the rest. As he left I observed that his peculiar call changed. Whilst waiting for his return I watched a flock of most exquisite birds (the *Pericrocotus brevirostris*, of Hindustan) playing on a tree close by; they resemble wagtails in form, but are much larger, the plumage of the male being vermilion, with black head, and that of the female, canary yellow and olive green. I should have shot specimens, but considered that my mere arrival would be a sufficient source of excitement without the firing of guns.

Just before leaving the last trace of cultivation, a young Chinese, an inmate of "Hawk-eye's" own house, and personally known to both these savages, asked leave and was allowed to join the expedition; but when we had reached this particular spot and were sitting down, he wandered slowly on ahead of his own accord, and was suddenly missed by us. At once the savage who was remaining with us jumped up, ran after him, and called him back in haste, because, as "Hawk-eye" told me, if he should happen to come across any other of the savages, who were not aware of our arrival, he would almost certainly be killed. This incident shows the wild and wary nature of this people.

At length there was a distant call from the chief, and the other savage led me on. A little more winding about, and I emerged on the top of a narrow ridge, crowned by the savage huts; and who were the two first on whom my eye should fall but my old acquaintance and the beautiful Egyptian?

After the long morning's race over stock and stone I was not sorry to sit down. The hut in which I found myself, and it was a fair sample of the rest, was of the rudest possible description. The doorway was so small that it was a task to get in; the walls were composed of the branches of trees stuck in the ground a few inches apart, the interstices being filled with bits of chopped wood; the roof was thatched with grass. Three sides were occupied by raised bamboo sleeping platforms, some 15 inches above the ground; there were no windows. At one side was a slight depression in the ground, which served as a fireplace, logs of trees being laid over it end to end, and constantly pushed further in as they gradually


NORTH FORMOSA,
Reduced from Map,
By J. W. Patersson, (Chinese) Customs Service 1882
in illustration of Mr. Hancock's Paper,
pp. 146-191.
Var 0° 55" W
MAGNETIC
Port of Tamsui
Rise and Fall
7 to 10 ft
Tamsui
Hilang
Kimpoan and District
Double Rock
Sand
Hot Springs
Sulphur Springs (Geysers)
Port of Kelung
Kelung Island or Hilang Kiit
Image Point
Coal Harbour
Kelung
Small Junks and Boats may anchor here
Coal is found here in abundance, of very good quality
Very superior Tea grows on these Hills
Very low level Land, presenting an unbroken view of Rice Fields
Twatutia
Sinlaokung
Bridge
Road
Tamsui River
Tea District
Woodcutters' Camp
Woodcutters' Huts
Small Lake
Rice Fields
Tea grows on these Hills
Banquahae
Rapids
Hoham and District
Chegham
Kongkwan
Aquadolce
Sugar Hemp, and Vegetables on this Plain
Very High and rugged Mountains
Very little Tea
Very scanty wooded Ranges
Kapulan District
Kapulan Range
Kapulan Plain
Thaosiah
Bar
Keep Island (copied from Admiralty Chart)
Village
Densely Wooded
Rice Fields
Point in the Forest reached by Mr. Hancock in company with Captain Savage, on 28th February 1882.
Tunge Range, from 2,000 to 3,000 feet
Line of Boundary
Mountain Range, from 2,000 to 3,500 feet
Tea grows on these Hills
Tea and Rice
Fikkon Bay
Samtina
Point
Height of Rapids
Lownan or Wanoyan
Rapids
Tea District
Tea District (Plateau 350 ft)
Tea District 900 ft to 1000 ft
Tea District 1000 ft
Tea District 1000 ft
Tea District 1000 ft
Farm
Farm
Farm

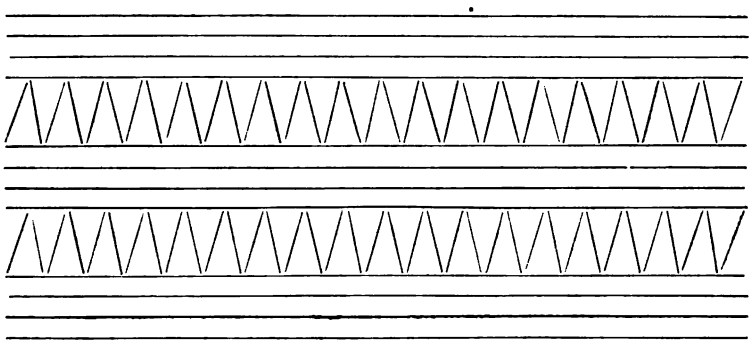
consumed away. All the village crowded in—women, young girls, and children of all sizes; but the male savages, with the exception of those referred to, were all absent on a hunting expedition, having been gone several days. From the roof were suspended various requisites of the chase—bows, arrows, and deer skins,—besides sundry articles of domestic use, all of the rudest kind.

Having had something to eat, I strolled out amongst the other huts, and everywhere was well received. What particularly struck me was the fearlessness of the women and girls and the frankness of the children, who were most interesting. They came close up to me, examined my clothes with their large dark eyes, pulled my whiskers, and were never tired of looking at my watch. They are bright, and I should say intelligent, and incomparably more interesting than Chinese children; so simple, natural, and unsophisticated. All smoke, from the youngest to the oldest of both sexes, and it was truly ludicrous to see tiny mites of certainly not three summers —stark naked—with pipes in their mouths; in which respect, however, they are surpassed by the natives of the Matabello Islands (Malay Archipelago), who smoke cigars before they are weaned. The women and girls carry their pipes of bamboo stuck in their hair, somewhat in the style of the *liangpat'ou* head-dress of the Pekingese ladies, and keep the tobacco-bags hung round their necks; they at once offered me a smoke. Some of them were playing upon a curious kind of jew's-harp, made out of a slip of bamboo with threads at each end, whilst one girl, of about 16, danced. The dance was neither a fandango nor a bolero, nor yet a minuet, but bore some resemblance to all three; it was so intensely grotesque that I laughed uncontrollably. No sooner had she finished than the girls came up to me and, offering me a jew's-harp, made signs to me to dance. The harp alone was a sufficient mystery to me, but when the minuet was added, the *tableau* was complete; my audience threw themselves down and screamed with laughing. From this performance I passed to a scene of somewhat different character; a few yards along a path, a step to one side, and I stood before a scaffold of camphor branches on which reposed a grinning row of human

plexion was light olive, and in the case of these three the profile not specially pronounced. Their expression was by no means unpleasant. The girl was on a somewhat large scale and rather Egyptian in face, putting me in mind of the bas-relief on a mummy coffin. Her dress resembled that of the men, but there was more of it; she wore, in addition to the hanging toga, a sort of *sarong* in picturesque colours, extending from the waist almost to the knee, and a pair of regular mocassins. Her hair, which was quite black, was not long, and was tied up with a string behind in one place; her ear-rings were very curious—a couple of pieces of carved bamboo, thicker than a pencil and about an inch long, thrust through the ears, and holding suspended little strings of blue glass beads and flat bits of white ivory. As the sun was going down and the river had to be crossed once more, I took my departure, having arranged that the savages were to be brought in next day to the bartering-house by the river.

Early in the morning the first thing to be done was to purchase a pig; and having accomplished this, I moved on to the samshu shop, where a big crock was placed on the floor, and the shopman began to ladle out the stuff at a rate which rather astonished me, as though the savages wanted to wash in it. "Oh," said the Chinese, "that's nothing; they drink it like water." I confess the article was not very deadly, so that I paid my dollar and completed the purchase, despite my qualms about giving 29 catties weight of samshu to four savages. Arrived at the rendezvous, I found not only my four friends of the previous evening, but eight more, to whose savage ears the rumour of roast pork had penetrated far in their mountain fastnesses, so that now I had a goodly show of 12 for inspection and comparison. Having set myself by the door, as the house was rather dark, I ranged them all in a row in front on benches, so as to obtain a good view. The first thing that struck me was the great variety of type. One girl of about 22 was not only good looking, but of dignified and graceful mien, and for dress and style the personification of Miss BATEMAN in "Leah;" olive complexion, large and beautiful

eyes, long eyelashes, and a remarkably well-formed nose. On her head she wore a picturesque dark turban embroidered round the edge in red; her ear-rings were the same as the other girl's, but her general style was superior. The tattooing, strange to say, seems not to disfigure these Natives—in fact, it rather adds piquancy than otherwise. The pattern is the same in all, and may be compared to a pale blue gauze band or ribbon, starting in front of the ears and passing down in a slope to the corners of the mouth, where it divides, half going over the top and meeting under the nose, and half passing under the lower lip and meeting on the chin. It measures 1⅝ inches wide; the edges are each made up of four longitudinal lines close together, and the centre of the band is the same, the intervening spaces being filled up with simple zigzag lines, thus:—



The tint is pale blue. The men do not have anything at the sides, but merely a narrow band down the centre of the forehead about half an inch wide, and consisting of horizontal lines close together. This is not worn until the individual has accompanied a party on a raid against the Chinese; and when, afterwards, he has himself killed a Chinaman and brought home his first head, a similar band is added to the chin. Excepting the youths, all the gentlemen present had this badge, but exactly how many Chinese each had slain I did not learn.

After a number of questions, I ordered the samshu to be brought in and placed in the centre of the floor. This was done,

THE WASHINGTONS AND THEIR CONNECTION WITH WARTON.

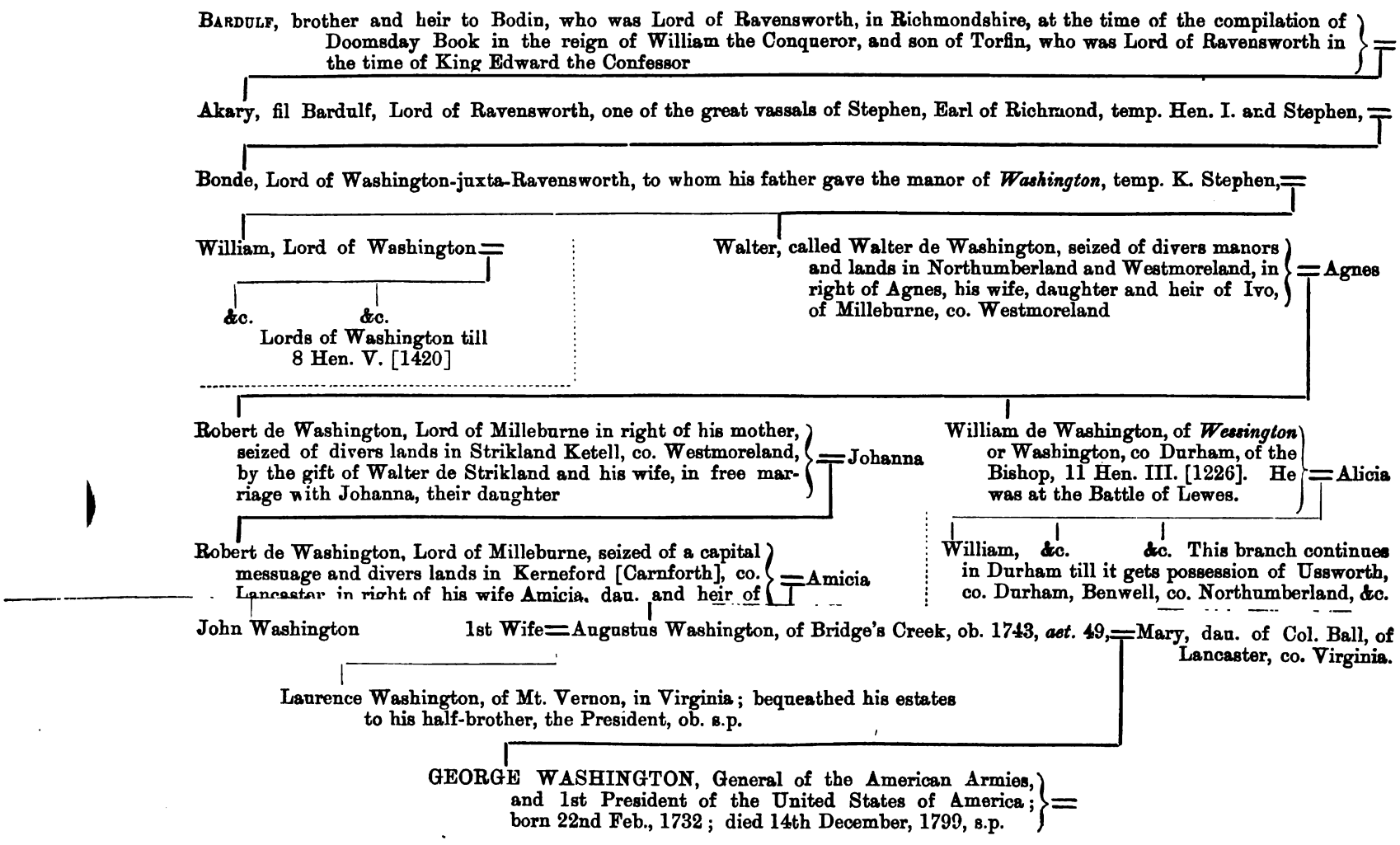
By HENRY WHITMAN.

Great interest has always been felt, both in England and in America, with regard to the whereabouts of the ancestry of the family which produced the great leader and statesman of the revolted colonies in America towards the close of the 18th century.

That the Washington family lived in England for many centuries before their appearance in America is shown by memorials, and notices of them in the histories of the many places which they inhabited. These places, in most cases only small villages, are scattered over the counties of Northumberland, Durham, Westmoreland, Lancaster and York, Northampton, Leicester, and a few in the South. Though nearly all claim, or have claimed till recently, that the immediate ancestors of the American Washingtons lived in their own village or town, it is evident that not all can rightfully hold that honour, and I think I shall be able to show that though nearly all have connection with the main stock, the one which is most interesting to us as having contained the very men who emigrated to America, and there founded the most illustrious branch of the family, is the village of Warton in North Lancashire, about eight miles north of Lancaster.

But first of all let us trace the Washingtons from their very source, and see where and what that source was. There is a small village about four miles distant from Richmond in Yorkshire, called Ravensworth, and there used to be another one near it, of which Harrison, in his *History of Yorkshire*, speaks as follows:—

PEDIGREE OF THE WASHINGTON FAMILY.


Bardulf, brother and heir to Bodin, who was Lord of Ravensworth, in Richmondshire, at the time of the compilation of Doomsday Book in the reign of William the Conqueror, and son of Torfin, who was Lord of Ravensworth in the time of King Edward the Confessor
Akary, fil Bardulf, Lord of Ravensworth, one of the great vassals of Stephen, Earl of Richmond, temp. Hen. I. and Stephen,
Bonde, Lord of Washington-juxta-Ravensworth, to whom his father gave the manor of Washington, temp. K. Stephen,
William, Lord of Washington
&c.
&c.
Lords of Washington till 8 Hen. V. [1420]
Walter, called Walter de Washington, seized of divers manors and lands in Northumberland and Westmoreland, in right of Agnes, his wife, daughter and heir of Ivo, of Milleburne, co. Westmoreland
Agnes
Robert de Washington, Lord of Milleburne in right of his mother, seized of divers lands in Strikland Ketell, co. Westmoreland, by the gift of Walter de Strikland and his wife, in free marriage with Johanna, their daughter
Johanna
William de Washington, of Wessington or Washington, co Durham, of the Bishop, 11 Hen. III. [1226]. He was at the Battle of Lewes.
Alicia
Robert de Washington, Lord of Milleburne, seized of a capital messuage and divers lands in Kerneford [Carnforth], co. Lancaster, in right of his wife Amicia, dau. and heir of
Amicia
William, &c. &c. This branch continues in Durham till it gets possession of Ussworth, co. Durham, Benwell, co. Northumberland, &c.
John Washington
1st Wife
Augustus Washington, of Bridge's Creek, ob. 1743, aet. 49,
Mary, dau. of Col. Ball, of Lancaster, co. Virginia.
Laurence Washington, of Mt. Vernon, in Virginia; bequeathed his estates to his half-brother, the President, ob. s.p.
GEORGE WASHINGTON, General of the American Armies, and 1st President of the United States of America; born 22nd Feb., 1732; died 14th December, 1799, s.p.

NOTE.—The names in brackets are of people mentioned in the Wills (quoted later) and not given in the Pedigrees from which this Table is constructed.

"This small village, formerly called Washington, Quassington, Whassyngton, and Washington-juxta-Ravensworth, but which since the time of King Henry VI. has borne the name of Whashton, is four miles distant north of Richmond, and gave the name to the family which, in the eighteenth century, produced the celebrated General George Washington, Commander-in-chief of the armies, and first President of the Great Republic of the United States of America, and it was also the birth place of the author of this work.

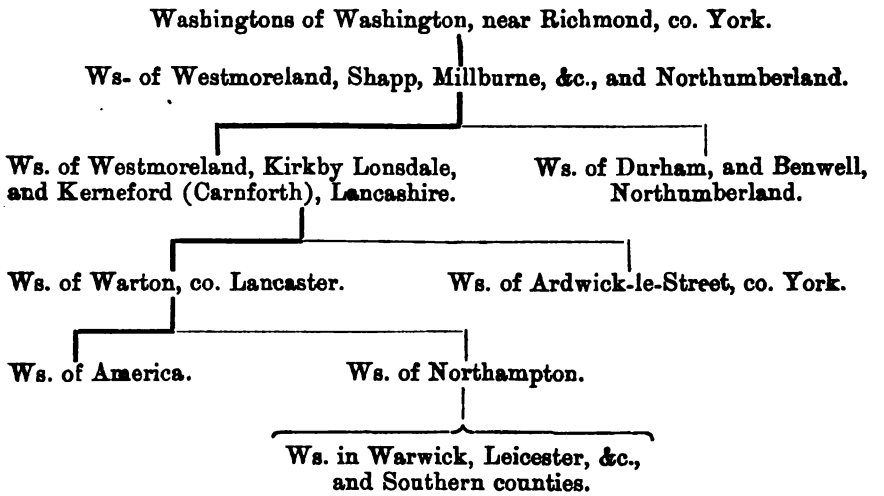
"Whashington is not mentioned in Domesday Book, as the geldable land here was included with Ravensworth, the whole then belonging to Bodin.

"Akary, the son of Bardolf, the brother to Bodin, gave the manor of Washington to Bond fil Akary his son, who was sometimes called Bond de Ravensworth, and sometimes Bond de Washington."

This seems to fix the source of the Washington family, and then Pedigrees are given showing how the family sent branches from county to county, and finally to America. They were apparently lords of Washington-juxta-Ravensworth till the time of Henry V., when, says the Pedigree: "Edmund Washington was a man-at-arms with Sir John Neville, chivaler, at the battle of Agincourt, 3 Hen. V.; an officer in the army of King Henry V. in France, 8 Hen. V. [1420]."

By a marriage in the time of King John the family got possessions in Westmoreland and Northumberland, first at Millum or Millburne, then at Rosegill, Shapp, Kirby Lonsdale, &c., and from Westmoreland they sent branches to Adwick-le-Street, near Doncaster, Yorkshire, to Benwell, near Newcastle-on-Tyne, Northumberland, to a village in Durham, called Wessington, Wassington or Washington, after them probably, and to Warton in Lancashire, whence a part emigrated to Northamptonshire. The adjoining Genealogical Table, made up from the various Pedigrees in Harrison's History will show the changes of location of the family and the connection of the different branches.

Perhaps the relation of the latter may be shown roughly and more clearly as follows:—


Washingtons of Washington, near Richmond, co. York.
Ws- of Westmoreland, Shapp, Millburne, &c., and Northumberland.
Ws. of Westmoreland, Kirkby Lonsdale, and Kerneford (Carnforth), Lancashire.
Ws. of Durham, and Benwell, Northumberland.
Ws. of Warton, co. Lancaster.
Ws. of Ardwick-le-Street, co. York.
Ws. of America.
Ws. of Northampton.
Ws. in Warwick, Leicester, &c., and Southern counties.

The following is an extract from Chief Justice Marshall's Life of Washington* (Vol. V. p. 669, &c.)

"PEDIGREE of GEORGE WASHINGTON

(communicated to the Editor by Sir Isaac Heard, Garter King-at-Arms.)

"It is presumed, upon good grounds, that the late President Washington was descended from a very respectable family of the name anciently established at Twitfield and Warton, in Lancashire, and afterwards Lords of the manor of Sulgrave, in the county of Northampton. Sir William Washington, of Packington, in Leicestershire, the eldest son and heir of Laurence Washington,

* The Life of George Washington, Commander-in-Chief of the American Forces during the War which established the Independence of his Country, and First President of the United States: compiled under the inspection of the Honourable Bushrod Washington, From Original Papers bequeathed to him by his deceased Relative. To which is prefixed an Introduction, containing a compendious view of the Colonies planted by the English on the continent of North America. By John Marshall, Chief Justice of the United States, &c., &c. 5 vols. 4to. London: Richard Phillips. Vols. I. II. 1804. Vols. III. IV. 1805. Vol. V. 1807.

of Sulgrave, Esq., married Anne, the half-sister of George Villiers, Duke of Buckingham. This Sir William had, among other younger brothers, two, named *John* and *Laurence;* and the latter appears to have been a student at Oxford in 1622.

"John and Laurence Washington, brothers, emigrated from the *North* of England (according to the tradition in the family of the President), and settled at Bridge's Creek, on the Potomac River, in the county of Westmoreland. John was employed as General against the Indians in Maryland, and the parish in which he lived was called after him.* He was the father of Laurence Washington, Gent., who died in 1697, leaving two sons, John and Augustine. Augustine died in 1743, at the age of forty-nine, leaving several sons by his two marriages. George, the President, was the eldest by the second wife, Mary Ball, and was born the 11th of February, 1732."

In the Pedigree of the Washingtons of Northampton in the *History*, I have found two brothers, John and Laurence, brothers to "Sir William Washington, Knight, of Pakyngton," but I think the authority above quoted from the *Life of Washington* applied the "tradition" to the wrong family, and was ignorant of the fact that there was another pair of brothers, John and Laurence, sons of Leonard Washington, of Warton, as shown above in the Genealogical Table, and who both "emigrated to America in 1659." This would also fit in with the tradition of their having come from the North of England. Moreover, the Pedigree says of John and Laurence Washington, of Northampton, "Laurence, student at Oxford, 1622; parson of Purlingham, co. Essex, 1643." "Sir John Washington, of Thrapston, co. Northampton, ob. 1663, buried at Thrapston."

From the descriptions of the members of this family, as they are given in the Pedigrees, it would seem that they did not

* This John had previously resided at South Cave, in the east riding of the County of York, upon an Estate now [1807] the property and residence of H. B. Barnard, Esq., of Cave Castle, South Cave, and he emigrated to America about the year 1657.—EDITOR.

take a prominent part in many of the great wars, external and internal, of the country. There was a William de Washington of Durham at the battle of Lewes, two Washingtons at the battle of Agincourt: one was the Edmund Washington, of Washington, already mentioned as perhaps the last of that line; the other was "John, fil John Washington, of Warton, 4 Hen. IV. [1403]; was wounded at the battle of Agincourt, 3 Hen. V." Then there were two Washingtons of Adwick-le-Street, father, and son, who were in the great Civil War:—"James Washington, of Adwick-le-Street, Lieut.-Col. in the army of King Charles I., slain at the siege of Pontefract;" and his son, "Richard Washington, of Adwick-le-Street, Captain in the trained bands, aged 28, 1666; levied a fine on the manor of Adwick, 1678; died same year, *aet.* thirty-nine."

In the first part of the existence of the Washingtons, of Washington-juxta-Ravensworth, they seem to have spent their war-like feelings in law-suits about land, with an occasional raid on some one else's property to enliven things a bit. Thus we find:—"John fil Eudo de Washington claimed one booat of land in Ravensworth against his brothers Henry and William, 28 Hen. III. [1243]." (A *booat* is about 15 acres, v. *Webster's Dictionary.*) Again:—"Robert fil Eudo de Washington, under age 35 Hen. III. [1250], and in the custody of his uncle Henry, ... claimed against him and Alicia, his mother, half the manor of Washington-juxta-Ravensworth." "Alexander de Washington, defendant in a plea of trespass at the suit of John Aleyn for depasturing cattle on plaintiff's lands at Washington, and injuring his corn and grass to the value of 10 marks, 3 Rich. III. [1485]."

There are two names in the Genealogical Table which I have included for the sake of copies of two Wills, kindly lent me by Mrs. Bateson, which evidently are their's. They are both of the Warton branch, viz.:—Elizabeth Crofts, wife of Leonard, son of Laurence Washington, of Warton; and Robert, son of another Leonard, who was brother to the Laurence just mentioned. The following is how the copy of Robert's Will reads:—

"Jesus Anno dni—1588
7 Augusti Anno dni—1588—

In dei noīe Amen I robarte Washington of Warton sicke in bodye never the lesse whole and p fitte of mynde and memorye praysed be o^{r} Lord god doe ordeyne and make this my Laste wyll and testamente wth My Awne hande in manner and forme followinge Fyrste I bequeathe my sawle into the Mercifull hande of Almightye God my Maker and redemer trustinge troughe the meryte of his deathe and bytter passion to inheryte y^{e} kyngdom of heaven and my bodye to be buryed wth in my p ishe charche So neare my Swete chylde Elizabeth as I maye, Itm I geve and bequeathe vnte Jane my wyfe all my tentē [tenements? with final "*e*" for the plural as often in writings of this time, several examples in this will] and mylne [mill(s)? Mill = O.E. mylenes miln; *Webster's Dictionary*] wth all comodyties p fytte and comodyties to the saide temete and mylne belonginge or in any ewyse ap teaninge of the yearlye rente of VIIJ^{ll} XVIIJ^{s} j^{d} ob [£8.18.1.] wth all my hole Interest and tytle thearin togeather wth suche assewrance as I have for the same, To have and holde all the saide p^{e} misses wth thapp^{e} tennance [the appurtenancies?] to the saide Jane my wyfe to the usse of hir selfe and my sonn Leonarde vntyll he com to thage of XVIIJ^{te} yeares wheather she marye or noe and afterwards to have her wyddow righte thearin, togeather wth denyson howsse and garthinge of the yearlye rente of V^{s}—also I geve to my saide wyfe all that lyttel land . . . . I have in Warton and Erholme for and dewring hyr Lyfe and after hir decease or other yeares before expressed all my saide tentē mylne and Lande to com to Leonarde my son and hys heires for ever and for defaulte of him . . . . I geve freelye all my saide Lande in Erholme and Warton afforsaide to . . . . robarte Washington son vnto robrtē Washington w^{ch} robrtē was son vnto Lawrence Washington my vnckle and yf the saide fyrste recyted robarte doe refuse, or dye, or wyll nott dwell of ytt, hym selffe then I geve and bequeathe all my saide tentē myll what rente yearlye theye be of payable to anye p son or p sons what so ever, Also I geve vnto my saide wyfe and Leonarde my sonne all my goode and cattelle [goods and chattels?] moveable and vnmoveable my debtes Legace and funerall expences discharged vnto my said wyfe and sonne whome I make my full and whole executors of this my saide Laste wyll and testamente and my vnckles Mr. Wyllm Croft & Mr. Edwarde Crofte wth my Cosyn Mr. John Tompson to be Sup visors of this my Laste wyll & testamente desiring theyme to be good to my Saide Wyfe and boye,

p me robrte Washington

[Then there is a statement that the will was probated at "Kendall," on the 27th January, 1588.]

. . . . of Auguste—1588—
a trewe Copye of my cosyn
robrt Washington his Last wyll."

The Crofts mentioned in the end of the above Will were no doubt relations of Elizabeth Crofts, who married Robert's cousin Leonard Washington. They are mentioned again in Elizabeth's Will, which is as follows:—

"In the name of God Amen the xxvjth Daye of Marche in the yeare of o^{r}. lord god 1588 I Elizabeth Wasshington of Warton wydow sicke in body but whole and p fect of mynde and reme̅brance praysed be god. Do ordayne And make, this my last Will and Testament in man [manner] and forme following / First I gyve and bequeath my Sowle into the m cifull hande of Almighty God my Maker and redeemer, trusting throughe his death and passion to have forgyvenes of all my synnes, and my body to be buryed wythin my parrishe Churche of Warton / Itm I gyve to my Dowghter Mary Fourtie pownde in p^{e} ferment of her Mariage and in full payment of her childe part [child's part] and porcion of goode dew to her from her father or me, if she follow the advise and counsell of my brother Willm̅ and other her frende [her other friends], Otherwise my Will is she shall have but fourty Marke, Itm I gyve vnto my said dowghter Mary the blacke clothe w^{ch}. my brother gave me and to my Dowghters Jane and Elene eyther of theym a gowne. Itm I gyve unto eu^{e} y one of my dowghters children iij^{s}. iiij^{d}. a peece and to my sayd dowghter Jane one girdle wth Penn^{es} of Silver, Itm I give vnto my sayd dowghter Elene xx nobles in mony at such tyme as my sonn Robt̅ shall thinke good / Itm I gyve to eu^{e} y of my s^{e}. vaunte xij^{d}. a peece and to my dowghter Margarett one of my best kerchers / Itm I gyve unto Margarett Hudson one kercher And one three quarters and to John Hudson a busshell of Barly / All the residew of my goode and cattelle unbequeathed I gyve unto my said sonn Robt̅ whom I make my whole executo^{r}. of this my last Will and Testament he discharging my Debte legasies and funerall expence. Itm I give unto Elene Johnson one Arke standing in the Midle Chambre, And to my dowghters Jane and Mary my best paire of beade to be equally devyded betwene theym / Also I desire my brothe^{rs}. Mr. Willm̅ Croft and Mr. Edward Croft to be Sup-vsyo^{rs}. of this my last Will and Testament to se that yt be fulfilled in all thinge as before said / Wytness^{e}. herof Willm̅ Croft gent̅. John Hudson Margarett Blackburne and Mary Wasshington wyth others."

Then follows a declaration that the will was probated on the 3rd of January, 1588, at Kendal.

I also have before me the copy of another will, that of Michael Washington, probated 16th September, 1532, at Kendal. I cannot find the name Michael in the pedigrees of the Washingtons of Westmoreland, but in the will there is mention of one Robert Kitson among others as one of the executors of it, and he was

probably one of that family, with which John Washington, of Tuwhitfield, connected himself when he married "Margaret, daughter of Robert Kitson, of Warton, co. Lancaster, and sister to Sir Thomas Kitson, Knt., Alderman of London."

Also in *Murray's Handbook for Shropshire, Cheshire and Lancashire* there is in the description of Warton (Route 42, p. 290, col. 2) the following passage:—"In the township were born Sir Thomas Kytson, a rich merchant in the time of Henry VIII., and Lucas, the historian of the parish."

The Washingtons of Northampton spread into many counties, and among others into Worcestershire. I have been favoured with the following "Translation of Latin inscription on the Tombstone lying on the north side of the altar in the Parish Church of Wickhamford, near Evesham, in the county of Worcester.

"Sacred to the Memory of
PENELOPE,
daughter of that renowned and distinguished soldier, Colonel Henry Washington. He was descended from Sir William Washington, Knight, of the County of Northampton, who was highly esteemed by those most illustrious Princes and best of Kings, Charles the First and Second, for his valiant and successful warlike deeds both in England and in Ireland. He married Elizabeth, of the ancient and noble stock of the Packingtons, of Westwood, a family of untarnished fidelity to its Prince and love to its Country. Sprung from such illustrious ancestry, Penelope was a diligent and pious worshipper of her Heavenly Father. She was the consolation of her Mother, her only surviving parent; a prompt and liberal benefactress of the sick and poor; humble and pure in spirit, and wedded to Christ alone. From this fleeting life she migrated to her Spouse, February 27th, Anno Domini 1697.

Penelope Washington is not mentioned in the pedigree of the Washingtons of Northampton, but the above Col. Henry and Sir William are included in it, Sir William being described as "Knt of Pakyngton, co. Leicester; buried 1643," and Col. Henry, his son, as "aged three years, 1618; levied a fine on the manor of North Cave, co. York, 1694."

Now we come to Warton itself, a village situated at the foot of Warton Crag, about one mile from Carnforth, on the left, going north. The name *Warton* means "town on the Ware," I suppose,

as Lucas in his History of the Parish says when describing Warton:—"The Ware is a large tarn or pond which yearly is contracted. I make no doubt but that it formerly comprehended not only the Mires but also that large flat of meadows and mosses in Warton, Carnford, Borwick and Caponwray; this will appear no improbable conjecture if we do but consider how natural it is for pools and lakes where there is no great depth of water to become firm ground by alteration. The Ware is remarkable for breeding abundance of eeles. I have often with pleasure observed how the young ducks would squeak and frisk about in a fright as they swim on the Ware, which is occasioned by the eeles biting their feet."

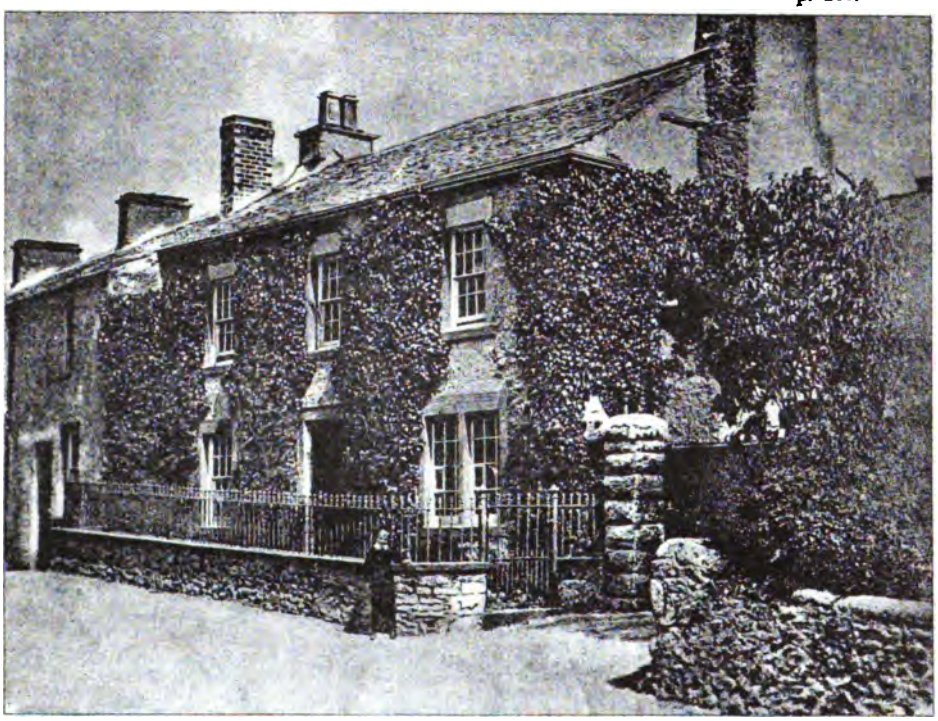
The village is small and straggling, as most of the houses are on the road which goes winding up through them. About half way up the village is the Post Office, and on the other side of the road the Church, of which more later.

It was one lovely day in February when I visited this "Home of the Washingtons," one of those sun-shiny and comparatively warm days which are often experienced in this part of the country in winter. Warton is placed on one side of a valley, which is bounded on the other by a range of hills, with hills standing out well among them. On this day the mountain was completely covered with pure white from a recent snow-fall, and, as one can imagine, looked superb, its own clear white being contrasted by its sharply defined shadow thrown on the adjoining hills. By walking to the top of the Crag a glorious view of the Lake Hills was obtained, alone worth a visit to Warton.

But to return to the village itself; as I have quoted above from Murray, the historian of the parish, Lucas, was born here, and has described his birth-place pretty fully in his "History" (written in first part of 18th century). He says:—"The houses of this town and parish are all of stone, strongly laid in and rough cast with lime, which makes a substantial warm and not unhandsome building. The street is rocky, uneven, and abounds with wormwood. . . . . Adjoining the Ware is a pleasant seat, the habitation of Mr. Will Dawson, captain of the Trainbands com-

THE "ARMS OF WASHINGTON," ON WARTON CHURCH.

p. 201.



BEMROSE & SONS PHOTO-TINT. LONDON & DERBY.

THE "WASHINGTON HOUSE," WARTON.

p. 204.

manded by Sr. Henry Houghton, of Houghton Tower. It formerly belonged to the *Kitsons*, a flourishing family, one of which, called the rich Kitson, was born here and was Sheriff of London 1553: in the time of the Oliverian faction Tho. Kitson, of Warton, Gent., compounded for his estate here paying 390 Pounds." Of the Church he says:—"By whom or in what age this Church was built I can have no knowledge of. I am apt to think that the Church was first built here by some Saxon Thane towards the declension of the Heptarchy, and dedicated to the memory of St. Oswald, who had lately been their King, and was then in great repute for the pretended miracles done by his relicks.

"The present foundation of this Church is a neat uniform fabrick as any Country Church betwixt here and London. The walls are strong and rough-cast all over with lime mixt with small blue pebbles gathered from the sea shore." Again, "The dimensions of this Church are as follows:—the circumference 375 feet, in length within the walls 124 feet, in breadth 60 feet, the breadth within the walls in the chancel 22 feet 2 inches."

We were kindly shown about and over the church by an old inhabitant of the village, Mr. Tatham, who gave us information about the Washingtons, since confirmed by the Pedigrees, &c., already quoted from. At the east end of the Church, just under one of the windows, and outside, is a tombstone with this inscription:

> "Mrs. Elizabeth Washington, June the 15th, 1751.
> Thomas Washington, Clericus Hujus Ecclesiae
> Vicarius, obiit die Septimae Febr. MDCCCXXIII.,
> aetatis Suae anno Sexagesimo nono."

At the west end, to the left of a window which has been put in where the main entrance used to be, is a shield cut in the stone, and which was brought to light about two years ago by the falling and peeling away of the rough cast which now covers the stone work. This shield has two bars across with a very plain impression of three little crosses or stars on the top space. I expect this is what Lucas refers to when he says:—"The Steeple is built at the West end of the Church, which is ascended by 69 steps, square at

the top within the Wall is seven yards one way and seven yards one foot the other, on the North side of the Steeple Door [*i.e.*, the left as the steeple faces west] is the Arms of Washington (Argent Two Bars Gules, in Chief Three Mullets of the Second, with a Crescent for difference) well cut in stone which shows this Family (yet credible in this Town) to have been mostly concerned in the founding this Church."

I believe the description of the arms given above would do for that on the Church exactly, except for the Crescent, and, with the same exception, would also fit the Arms for the Washingtons of Adwick-le-Street, co. York.

One of the vexed questions with regard to the Washington Family is whether the stars and stripes of the American Flag have anything to do with the same in the Washington coat-of-arms. In the *Washington Number* of the *Magazine of American History* (edited by Mrs. Martha J. Lamb, New York), for February, 1888, there is an article on this question by Major-General Schuyler, which directly opposes an idea of such a connection. The reasons given are rather complicated, but the main points are as follows:— In possession of the noted family of the Adamses of Massachusetts, of whom John and John Quincy, his grandson, were the most noted, is an heirloom, consisting of a seal representing an eagle holding in its beak a lyre with thirteen stars scattered over the latter, and the motto "Nunc sidera ducit" (now it leads the stars, a quotation from Manilius II. 336), with these stars radiating, as it were, into another set of thirteen which form a circle round the whole. Now up till June 14th, 1777, the Flag of the American colonies had been a union of the crosses of St. George and St. Andrew, the field of the flag being thirteen stripes, as now, alternately red and white. But on this day Congress passed a resolution "that the Union be thirteen stars, white in a blue field, representing a new constellation." And John Adams was President of the Board of War then, so that the question of the new flag came under his consideration. Moreover the drawing of the first Flag of the United States, in the State Department at Washington, represents the thirteen stars *in a*

circle, no doubt to represent everlasting duration. Then when John Quincy Adams was Secretary of State in 1820 he "substituted for the Arms of the United States, on its passports, contrary to the practice of nations, the device above described of the lyre of Orpheus on the Adams' heirloom." And the writer goes on to say that he considers that John Adams, when the change of the flag was brought under his notice, proposed as a substitute for the crosses of St. George and St. Andrew, this device of the thirteen stars and the lyre, as representing the harmony and endurance of the new Republic, that the circle of stars was adopted as shown in the drawing of the first flag and then was changed to the present form, as it would admit of adding a new star for each new state; and he thinks further that John Adams' grandson, John Quincy Adams, meant to bring forward a silent token of this, when he changed the seal on the passports. At this time too, Washington was only Commander-in-Chief of the Armies, while it was Congress that arranged the change in the flag, and the General was not at all popular, there being a strong movement towards supplanting him with Sir Horatio Gates, fresh from the victory of Saratoga.

So much, then, against the supposition of there being any connection between the Arms of the Family and the Flag. I have not been able to find any evidence to refute the above, supposing it is possible, but if it is true one must consider it a curious coincidence that the two have so much in common.

With regard to the "stars" in the Arms of Washington, it seems from the description given above that they stand for "mullets," which I find to be used in Heraldry as "a figure in shape like the rowel of a spur, used as the filial distinction of the third son" *(Webster's Dictionary)*. As a confirmation of this it is interesting to observe that the ancestor or first one of the Family of the Washingtons of Lancashire, Robert Washington of Kerneford (Carnforth), was the *third* son of Robert de Washington, Lord of Millburne, and Amicia, daughter and heir of Hugh de Kerneford, who was Lord of the latter, and the Arms of the Washingtons of Washington, and then of Westmoreland were simply Argent Two

Bars Gules, and the three "Mullets in Chief" immediately appear in the Arms of the Lancashire branch.

When we had seen the outside of the church, we were taken into it and shown the pew which was used by the Washingtons. It was also used by the Middleton family, who were great people in this part of the country in the 16th Century. The pew is a large, square, old-fashioned one, and has several parts of a coat-of-arms carved in the panelling round the seats. There are nine of these carvings, eight of which are imitations of parts of the coat-of-arms just opposite the door. This is said to be the joint Washington and Middleton Arms, the escutcheon is divided into eight parts, and underneath is carved the date 1614, and above it a helmet with closed vizor and a falcon's head.

On a pillar to the left of this there is a brass plate bearing the inscription: "Here lies the body of Sir George Middleton, of Leighton, Kg. and Bar. Who died y^{e} 27 yeare of Feb^{y}. in y^{e} yeare of our Lord God 1673 and in the 74 yeare of his age."

There is a rather small but substantial-looking house a little distance up the street, beyond the church, which is pointed out as the house inhabited by the Washingtons. There is nothing remarkable about it to be seen from the outside, and it is still in good repair, I believe, and inhabited.

As I have said before two Washington brothers emigrated to America from the North in 1659. They went to Virginia and settled at Bridge's Creek, where George Washington was born 22nd February, 1732. His half-brother Laurence, who had got possession of the estate of Mt. Vernon, bequeathed it to the General, who resided on it for the rest of his life, when not away on his numerous duties. He died on the 14th December, 1799, universally mourned by the nation, which testified its veneration of the great Father of his country by removing the seat of Government to the city whose site he had selected and which now was to bear his name.

BEMROSE & SONS. PHOTO-TINT. LONDON & DERBY.

LANCASTER CASTLE GATEWAY.

LANCASTER CASTLE.

By H. A. PALEY, A.R.I.B.A.

The site on which Lancaster Castle stands has no doubt from the earliest times been admirably adapted to the formation of a fortified camp or stronghold. The hill on which it stands rises steeply to a height of 120 feet above the river Lune, and commands a very extensive view of the surrounding country. The prospect on a clear day from the summit of the ancient Keep is unsurpassed in England. The Cumberland and Westmoreland hills, and the fells of Yorkshire, lie stretched out in a continuous line to the northwards, whilst the eye travels round from Clougha Pike and the Wyresdale Fells on the east, across the low-lying district of the Fylde to the entrance of Morecambe Bay and the estuary of the Lune, with the Isle of Man in the far distance.

Lancaster is generally believed to be the site of the Roman Bremetonacis, as there is no doubt they had a station on the Lune at this point, the distance northwards from Coccium (Walton-le-Dale) corresponding with that given for the position of the next station on the Roman Iter. There are, however, few, if any, authentic remains of Roman masonry to be found above ground, owing either to the devastating hand of the Northmen, who some forty years after the departure of the Romans in the fifth century, over-ran the seaboard of Britain, destroying the works of their predecessors wherever they were able, or to the ravages of the Picts and Scots, who over-ran the North of England about the same period.

The name was changed to Loncastre, or Camp on the Lon, by the Saxons, who during the sixth century re-built the Castle.

From this period to the Norman conquest little is known of the history of the Castle, but no mention of it is made in the Domesday Book, from which we may infer that it was at that time in ruins.

In the general distribution of land after the conquest, William the Conqueror bestowed Lancaster upon Roger de Poictou, the son of Roger Montgomery, who built the great rectangular Norman Keep or Lungess Tower, eighty feet square, placing it at the north-west corner of the enclosure, and, as is usual, on the highest ground. These rectangular Norman Keeps were only used as a residence in times of siege for the family and retainers, when, amply provisioned, and trusting solely to the strength of the masonry, the garrison was able to withstand successfully the attacks of the besieging force, either by sap or battery, the walls being built on broad and solid foundations and of immense thickness, whilst the windows were too small or were placed too high to be reached by fireballs.

Roger de Poictou being banished the country for disloyalty, King Stephen bestowed the Earldom of Lancaster upon his son William, Earl of Morton and Warren, but King Henry II., on his accession, resumed all the honours belonging to the crown, amongst which was Lancaster. This monarch, who had the laws put into better execution than in Stephen's reign, caused Lancaster Castle to be made a prison for malefactors, and appointed Wain, son of Gilbert de Furness, to be the keeper thereof.

Earl William died in 1160, and King Henry granted the Earldoms of Lancaster and Morton to his son John, to which his brother Richard added the Earldoms of Cornwall, Nottingham, and Derby.

In 1199 the Castle was besieged by Hubert de Burgh, Archbishop of Canterbury. Seven years later King John received in the Castle the French ambassadors. During his reign the moat was made round the Castle, a portion of which remained on the south side till 1850, when it was filled up.

King John granted to the town its first Charter, which was afterwards ratified and additional privileges granted by Edward III.

in 1361. From the time of John there appears to have been no Earl of Lancaster till King Henry III. conferred the Town and Castle upon his second son, Edmund Plantagenet, surnamed Crouchback, in 1267, creating him Earl of Lancaster in these words: "I grant unto my son Edmund, by this my charter, the honor, Earldom, Castle and Town of Lancaster, with the cow pastures and forests of Wiresdale, Lounsdale, Newcastle-under-Line," &c. On the death of Edmund, in 1297, his son Thomas, by his second wife, came to the title; but after causing the death of Gavestone, the favorite of Edward II., and subsequently obtaining the banishment of the Despensers, he was defeated by the Royal forces at Boroughbridge a few months afterwards, and was executed at Pontefract castle in 1320, his estates being forfeited to the crown. He was afterwards canonized in 1390, at the instance of certain noblemen, who went to Rome for the purpose. He and the other noblemen who suffered with him were the first Peers of England who were executed on the scaffold. To give some idea of the expenses of Thomas, Earl of Lancaster's household, his housekeeping account for one year was—for the buttery, pantry, and kitchen, £3,045; for grocery ware, £180 7s. 0d.; for 184 tuns and 2 pipes of claret and white wine, £104 17s. 6d.; for 6 barrels of sturgeon, £19; and for dried fish (ling, haberdines, or dried cod), £47 6s. 7d.; and the total expenses of the Earl's house from Michaelmas, 1313, to Michaelmas, 1314, was £7,957 13s. 4d.

After Edward's defeat at Bannockburn, the Scots came down and burnt the Town and partly destroyed the Castle.

Thomas's brother, Henry, after becoming custodian of Edward II., obtained a reversal of the attainder of his brother's property on the ground that he had not been tried by his peers, and became Earl of Lancaster. He died and was buried at Leicester in 1345, leaving his son Henry, Earl of Derby, who in 1351 was created Duke of Lancaster, being only the second to receive that honor, Edward the Black Prince, Duke of Cornwall, being the first.

Henry died in 1361, leaving his vast estates to his two daughters, Maud and Blanche, the latter of whom married John

O'Gaunt, fourth son of Edward III., Maud dying without issue John O'Gaunt thus became possessed, through his wife, of the whole estate, and was in 1362 created Duke of Lancaster by his father, and obtained of him a grant that the county should be made a Palatinate.

John O'Gaunt, possessed as he was of almost regal wealth, thoroughly repaired the Castle, and built the famous Gateway towers, which were approached by a drawbridge and defended by a portcullis. He took the red rose as his device, and his brother Edmund of Langley, Duke of York, took the white rose. We read that "before these two brethren took these two roses, which the fautors and followers of their heirs after bare in that pitiful distraction of England between the families of Lancaster and York, a white rose tree at Longleate bore upon one branch a fair white rose, and as fair a red rose on the other." John O'Gaunt died in 1399, and his estates were seized by his nephew, Richard II.

Henry of Bolingbroke, son of John O'Gaunt, Duke of Hereford, being then in banishment abroad, landed in Yorkshire, deposed his cousin Richard, and became King of England. Being unwilling that the title of Duke of Lancaster should lapse, he obtained an Act of Parliament entailing it upon himself and his heirs, his son Henry being created Prince of Wales, Duke of Aquitain, Lancaster, and Cornwall, and Earl of Chester, holding the dukedom of Lancaster severed from the crown during his father's reign. During the reign of Henry IV. the Royal Court was held at Lancaster, and within the Castle walls must have been held many a tournament and scene of court festivity.

Henry V. on his accession annexed to the Duchy a very great estate which had fallen to him in right of his mother, daughter of the Earl of Hereford.

During the Wars of the Roses, although the fighting never apparently extended here, the Castle shared the varying fortunes of the two houses, Edward IV. fleeing here on one occasion from York. The Castle was, however, maintained more for state purposes than for war.

Edward IV. appropriated the duchy to the crown, that is, to himself and his heirs as Kings of England; but this entail was not of long duration, for Henry VII. broke this settlement and made it into a separate duchy, with its own chancellor and other officers, which it still has in the present day.

In 1487 Lambert Simnel landed at the Piel of Fouldrey in Furness, and passed through Lancaster, but did not seize the Castle, passing on southward to Stoke, where he was defeated.

In 1537 the last Abbot of Whalley was brought to Lancaster, tried and convicted on a charge of high treason, and was taken back to Whalley and hanged in front of his own Abbey. The Abbot and Prior of Sawley were tried and executed at Lancaster at the same time.

In the reign of Elizabeth, three years before the threatened invasion of the Spanish Armada, the Castle was repaired and the upper portion of the Keep rebuilt, a stone in the battlement bearing the inscription E. R. T. [Eliza regina tollit (?)] 1585 – R.A., Richard Asheton being the High Sheriff at that date. It was on the Keep that one of the chain of beacon fires was lit, which sent word of the approach of the Spanish Armada throughout the length and breadth of the land.

The next important event in the history of Lancaster Castle is the celebrated trial in 1612 of the so-called Lancashire Witches, twenty in number, ten of whom were condemned to death, one of them—the oldest of all—dying before the trial, owing to her confinement for five months in the dismal dungeons of the Castle. One, Margaret Pearson, was sentenced to stand "upon the pillorie in open market at Clitheroe, Padiham, Whalley, and Lancaster, with a paper on your head in great letters declaring your offence," and to be afterwards imprisoned for one year. Five more were acquitted, but were bound over to keep the peace! And three others—witches of Salmesbury—were acquitted owing to the only witness having been suborned to give evidence, and the whole charge discovered to have been a fabrication. Twelve of these witches hailed from the Forest of Pendle, their names being

—Elizabeth Southernes, alias Old Demdike, who died in prison, aged over 80 years; Elizabeth Device, alias Young Demdike; James and Alison, son and daughter of Elizabeth Device; Anne Whittle, alias Chattox, 80 years of age; Anne Redfern, her daughter; Alice Nutter, a wealthy lady, who stoutly maintained her innocence to the last; Katherine Hewitt, alias Mouldheels; John and Jane Bulcock, and Margaret Pearson. All these (save Old Demdike, who died before trial, and the last named Margaret Pearson) were condemned to death, and executed the following day on Lancaster moor, the principal witness against them all being a girl only nine years old, named Janet Device, grand-daughter of Old Demdike, and daughter of one and sister to two of the prisoners. A curious feature of the trial, which only lasted a day, was the fact that several of the reputed witches confessed to the crime, and incriminated one another, owing to rivalry of the families. Thus were these poor people done to death, being convicted of having caused the death of sixteen persons "by devilish practices and hellish means." The Judges before whom these unfortunate persons were tried were Sir James Altham and Sir Edward Bromley, Barons of His Majesty's Court of Exchequer, and Judges of Assize.

In 1628 Father Edmund Arrowsmith, a Romish Priest, was executed for his religion, his body being quartered and fixed on stakes over the Gateway.

At the commencement of the civil war in 1642, when Charles I. raised the Royal standard at Nottingham, Lancaster Castle was held for the King, but in February, 1643, Major Birch, who was attached to the Parliamentary forces at Preston, took possession of the Castle, the High Sheriff, Sir John Girlington, being without a garrison having fled at his approach. Shortly afterwards a large Spanish ship came ashore in the Wyre near Roshale (Rossal), and the Roundheads hearing of the wreck seized the ammunition. Meanwhile, the Earl of Derby crossed the estuary and burnt the ship; but the Parliamentary force afterwards recovered twenty-two pieces of ordnance, carrying them up the Lune and lodging them in the Castle. The Earl of Derby hearing of this marched from Preston

with 1,500 infantry and 400 horse, and attacked Lancaster, which had a garrison of 600 men. The Royalists set fire to the town, but finding the Castle too strong for them, and hearing that Sir John Seton was advancing to succour the Castle with 2,000 men, retired southwards and marched on Preston, which they re-took and occupied. After fighting with varying success, the Royalists again laid siege to the Castle for nearly three weeks, but were again compelled to retire by the advance of Col. Assheton. After this there was no important engagement near Lancaster till in 1648 Col. Tyldesley besieged the Castle, but notwithstanding that some of the walls had previously been thrown down by order of Parliament, he was unable to reduce it.

In 1651 Charles II. with his Scottish army passed through Lancaster, and ordered the release of the prisoners in the Castle, spending the night at Ashton Hall. In 1663 a commission was appointed to restore the Castle. It was in this year that George Fox was committed for trial at Lancaster assizes for refusing to take the oath of supremacy, and for holding illegal meetings. After repeated refusals to take the oath, he was sent back to prison. He complained much of the bad repair of his quarters, which let in both wind and rain, but all the satisfaction he obtained was to be thrust into the Dungeon Tower, a still worse tenement, and here he was confined for a whole winter. In the spring of 1665 he was again remanded, and was then removed to Scarborough Castle, whence he was released in the autumn of 1666.

In the attempt of the Scotch to place the Pretender on the throne in 1715, the rebel army on its march southward was allowed to take undisputed possession of the town, proclaiming James III. at the market cross, and releasing, after some debate, the prisoners on the crown side of the Castle, but not the debtors. But on their defeat at Preston three days later, four hundred of them were brought prisoners to the Castle, guarded by a regiment of dragoons. A hundred of these were sent to Liverpool, fifty died in the Castle, nine were executed and their heads fixed over the Gateway, and the remainder were transported to America, except the noblemen and

gentlemen, who were sent to London and their estates forfeited.

In November, 1745, the rebels under Prince Charlie passed through Lancaster, and during their retreat in the following month stayed the night in Lancaster, and released the prisoners in the Castle, most of whom were re-captured on the following day by the Royal troops.

In 1774 the Prison Reformer, John Howard, visited the Castle, and suggested improvements in the prison arrangements which were carried out.

The last Royal visit to Lancaster was paid by Her Majesty Queen Victoria in 1851, accompanied by the late Prince Consort, on which occasion two ancient keys were presented to Her Majesty by William Hulton, Constable of the Castle, and were returned to him by Her Majesty, with a charge to safely keep the Castle for Her Majesty and the Queen's Justices. The larger key belonged to the Castle Gatehouse, built by John O'Gaunt, the smaller one being that of a lock added to the same gate in 1588, and delivered with a like charge to the then Constable by Queen Elizabeth.

There are some interesting facts connected with the Castle when it was used as a prison for most of the debtors in the county. Up to the year 1805 we find that the greatest number of debtors confined at one time was 211, but the average number was about 70. The debtors were accommodated in various rooms, for which they paid a certain sum on their entrance, and in each room there were two or three beds. The sums paid as "Rooms money" varied according to the quality of the lodging, and were demanded for the use of pots, pans, and fire. Having once paid they might stay in prison for any length of time without further payment. The following is a list of sums paid for the different rooms in 1826, by order of the Sheriff. Nos. 7 and 8, thirty shillings; "Royal Tap," and Snug, twenty-five shillings; Nos. 1, 2, 3, 4, 5, and 6, each twenty shillings; Long room and Quaker's room, fifteen shillings; Pigeon, twelve shillings; Well tower, Chancery, Pinbox, and Smugglers, each ten shillings; Constable room, seven shillings; Court of request members, five shillings.

One member of each room was chosen by a majority to be the steward or roomsman, and his accounts of the weekly receipts and expenses were audited by a member of the room appointed for the purpose. The dietary for poor debtors was as follows, for males and females: 20 ounces of household bread daily, 4½ ounces of oatmeal daily, 4½ ounces of salt weekly, and 10 lbs. of potatoes weekly. The debtors were allowed to work if they could procure it, and receive the whole of their earnings. They might also play ball, bowls, or other exercises.

Mock elections were held annually in July, for the representation of the ancient borough of "John O'Gaunt." Party spirit ran high. Likely candidates were waited upon by committees, and were nominated in due form, frequently making speeches of an hour's duration.

Bribery was frequent, the value of a vote being from half a gallon of ale to a leg of mutton.

In 1842 there were four candidates—two Liberals and two Conservatives. The votes were, Conservatives 231, Liberals 168, being a majority to the Tories of 63. The Solicitors and others connected with the insolvent debtors' court voted on this occasion. The day was brought to a close with a sumptuous dinner in the Quaker's Room, to which forty-five persons sat down. We are told that these elections generally cost about £50.

Lancaster Castle from the Norman conquest up to the end of last century must have varied very little in outline or area, judging from the plans and views of the Castle now extant. The Entrance Gateway is on the ancient Roman site facing south-east and overlooking the town, which, after being burnt in 1322 by the Scots, was rebuilt on the eastern slope of the green hill on the summit of which stood the ancient castle.

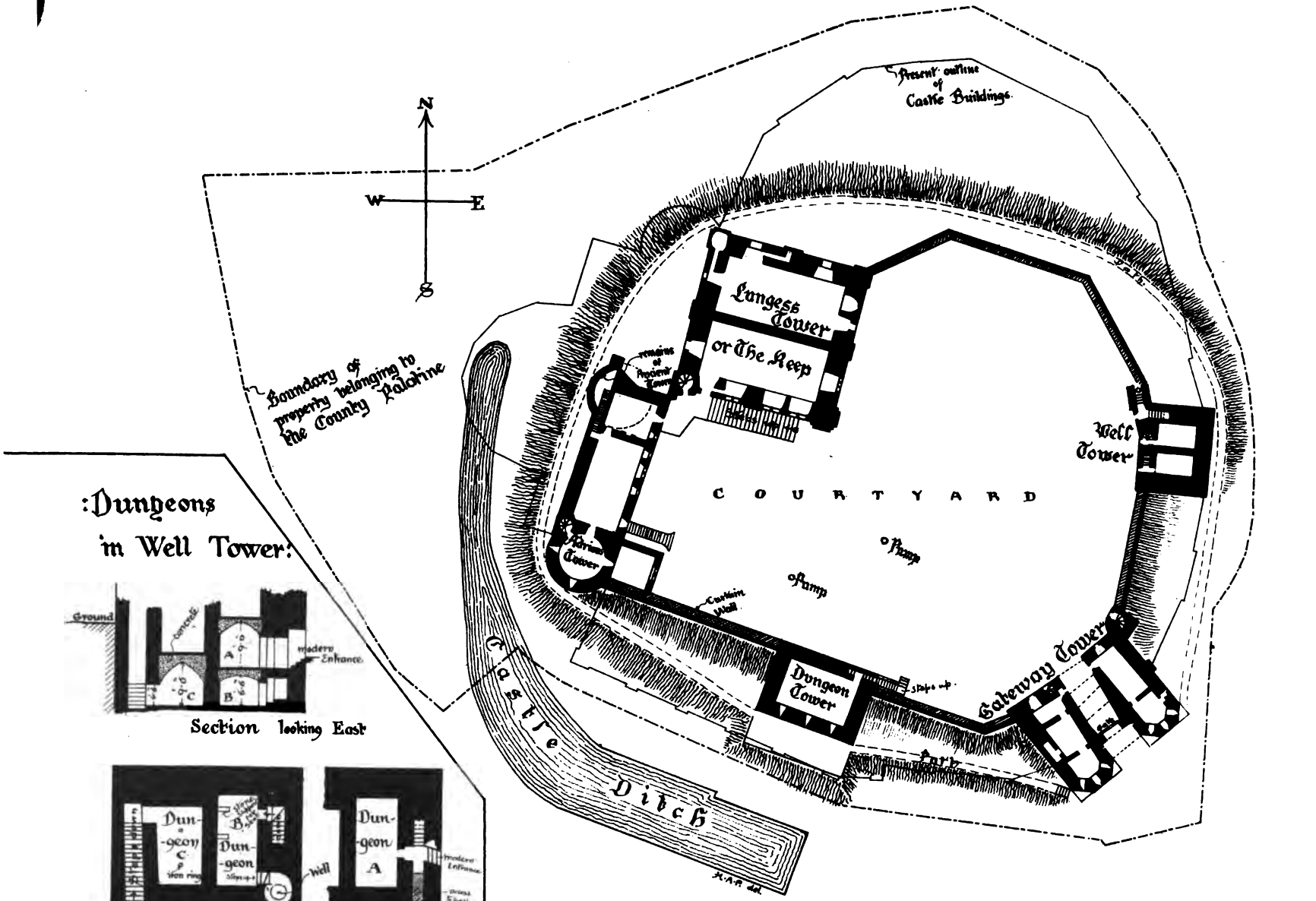
This noble Entrance, with its two flanking towers, surmounted by machicolated battlements, is, in its beautiful proportions and commanding position, second to none in England.

The earliest portion is the Roman circular staircase, situated at the left-hand corner of the courtyard, and at present extending up

to the first-floor chambers. The Gateway immediately behind the Portcullis, with its peculiarly low segmental arched head, hollow splayed molds and nail-head ornamented label and imposts, together with the ribbed and vaulted passage behind, belong to the early part of the thirteenth century, as does also the lower part of the gateway facing the courtyard. The outer archway, with its flanking semi-octagonal towers, is the portion which may be attributed to John O'Gaunt. The upper part above the niche, with its heavy projecting corbels supporting the battlements, pierced for the descent of missiles, and crowned on either side by watch turrets, belongs to the style of architecture which prevailed during the reign of Henry VII. The niche above the outer arch, with the shields on either side, has some indication, from the jointing of the masonry, of having been inserted. The statue of John O' Gaunt, which is modern, was the work of a mason named Claud Nimmo, and was placed in the niche in 1822. The shield on the south side of the niche bears the arms of France quarterly with those of England, and that on the north side the same arms with a label of three points. Mr. Roper, in his "Churches, Castles, and Halls of North Lancashire," enters very minutely into the matter, and clearly points out that the latter cannot be, as has generally been stated, the arms of John O'Gaunt, as the modern arms of France, which, as in this example, consist of three fleurs de Lys, were not used in England till after the death of John O'Gaunt, and he further shews very clearly that these arms, which belonged to the Princes of Wales, could only have been those of Prince Henry (afterwards Henry the Fifth), so that we must attribute either the building or the embellishment of this part of the Gateway to that Prince.

The Gateway was defended by a drawbridge over the moat. The two holes through which the chains of the drawbridge passed are to be seen in the outer archway, the bridge being raised and lowered by a windlass in the chamber above.

A very noteworthy feature in the plan of the entrance inside the Gate is the great pains that have been taken to place it on the


N
W
E
S
Present outline of Castle Buildings
Boundary of property belonging to the County Palatine
Langess Tower or The Keep
remains of Ancient Tower
Well Tower
COURTYARD
Pump
Pump
Curtain Wall
Dungeon Tower
Gateway Tower
Castle Ditch
:Dungeons in Well Tower:
Ground
concrete
modern Entrance
A
B
C
Section looking East
Dun-geon C
Dun-geon B
Dun-geon A
Well
modern Entrance
ancient Entrance
Plan
Plan
Scale of feet.
:Plan of Lancaster Castle:
prior to A.D. 1778
Scale of feet.

skew. The probable reason for this was to prevent the straight rush of an enemy who had forced the outer gate, and at the same time to somewhat expose their flank to the defending forces who themselves would be out of the line of sight to those advancing up the hill.

There are two stories of chambers above the ground floor. The centre chamber on the second floor was used at some time for a Chapel, and the marks remain where a large cross was fixed against the wall.

Although the erection of the Gateway, as it at present stands, belongs to at least three different dates, the whole composition shews that eye for proportion and dignity which the mediæval architects so rarely failed to possess. The accompanying plans and elevations will elucidate this description of the Gateway and other ancient portions of the Castle.

Before the governor's house was built on the north side in 1788, a curtain wall connected the Gateway with the Well Tower, so called from the existence of two deep wells within it.

The foundations of this ancient and gloomy Tower, which is forty-two feet long by thirty-eight feet broad, are supposed to have been laid by Constantine Chlorus in 305 A.D. The walls are nine feet thick, and beneath the ground level are three dungeons, plans of which are given. The roofs of these cells are of very curious construction, being composed of concrete formed upon a framework of twigs or osiers, portions of which are still embedded and may be picked out, though almost in a state of dust. They have probably been there for fifteen hundred years. These dungeons are completely dark and without any means of ventilation. In the stone floor of one of them are two iron rings to which the prisoners were secured. Access to the lowest dungeon is obtained by a narrow staircase in the thickness of the wall. In one corner of this pit are some steps leading to a well which at this day is full of excellent water. In comparatively modern times witches were confined in these dungeons.

In the last century a prisoner named Dicky Whittle, con-

demned to death, was placed in the lowest cell, but was reprieved on condition of becoming hangman, during which office he still continued to live there, though history does not say for how long.

At the north-west corner of the Well Tower is the commencement of a narrow passage passing over a well and most probably communicating underground with the next round Tower, the foundations of which were discovered when the three modern Towers were erected at the end of the last century.

There is no more ancient work remaining till we come to the famous Norman Keep, or Lungess Tower, on the north-west side of the enclosure, seventy-four feet square on plan and seventy feet high to the top of the battlements, with walls ten feet thick at the ground level. It is divided equally from east to west by a partition wall running up to the top five feet in thickness.

The northern compartment on the ground floor is now used as the prison chapel, that on the south side, called "John O'Gaunt's Stables," is used for stores. Lunatics were confined here and in the cells at the west end till the beginning of this century.

On the first floor on the south side was the old Shire Hall, and over that is a room where Fox was imprisoned in 1664. The northern half of the Keep was without a roof, according to a plan published in 1778.

The only original Norman windows remaining are two on the north side, about twenty feet from the ground. The other windows and the doorways have been inserted from time to time. The upper part and the battlements were completed in 1585. The Keep was ascended by a circular staircase at the south-west angle, culminating in a Turret called John O'Gaunt's Chair, rising ten feet above the battlements.

A very interesting discovery was made in 1878 when breaking into the north west angle of the Keep to form a staircase from the Grand Jury Room to the room below. The workmen broke into a narrow straight staircase in the thickness of the wall, at the top of which was a small recess, with a stone seat in it, commanding through a narrow slit a view of the bay and surrounding mountains.

This outlook had every appearance of having been in constant use, the stone steps being worn down as much as three inches and the seat corner, where the watchman had sat to escape the draught as much as possible, quite polished with continued wear. On the roof of the staircase, which is of concrete, was the imprint of the riven oak laths upon which the material was placed, the fibre and flower of the wood being as clearly depicted as on the day it was removed at the very least eight hundred years ago. The staircase was walled up again on the completion of the work.

During the excavations for the new Crown Court on the outside of the Keep, a well or pit of ashlar carefully wrought was discovered. It was cleared of rubbish to a depth of about twenty feet, when two doorways were found. One was open and led by a passage of smooth stone towards the church; the other, which was loosely walled up without mortar, was not opened, but seemed to lead in the opposite direction. The passages were unfortunately not further explored, and the well was filled up again. At the north-west angle of the Keep, just outside the Castle walls, stood the scaffold, where public executions took place from the year 1801 to 1865. Previous to this the gallows stood on Lancaster Moor. The first time the scaffold was used no less than eleven persons were hanged, before the gaze of thousands of people, who used to congregate to witness such dreadful spectacles in the adjoining parish churchyard. Altogether two hundred and twenty persons suffered the extreme penalty at Lancaster Castle up to the year 1865. Since that date executions have taken place within the Castle.

Projecting beyond the south-west corner of the keep was an ancient round Tower, connected with the keep by a square building of two stories, called the "Higher Judge Room" and the "Lower Judge Room," where debtors were confined in the intervals between the Assizes.

Upon the site of these buildings stands the Crown Court, opened in 1795. It is by no means a well planned or well ventilated court. It will hold about fifteen hundred persons. In the dock is still seen the branding iron and the iron strap through

which the convicted prisoner's hand was passed and held fast while the letter M (malefactor) was burnt in with the red hot iron. On the south side stands the old Crown Court, under which was the "High Stable" in which Howard, in 1774, directed the construction of the first cells, with a view to some reform in the conduct of the prisoners and the prison.

In front of the old Crown Court, and extending outwards over the site of the old Castle ditch, in which its foundations are sunk, stands the Shire Hall and Court of Nisi Prius, which, with the new Crown Court, Grand Jury Room, and other extensive additions in various parts of the Castle, was built at the end of the last century. It is rightly considered to be one of the most beautiful halls of justice in England. On plan it is the half of a fourteen-sided polygon, with an inner colonnade supported on six slender clustered piers, supporting an elaborate groined and fretted roof culminating over the Judge's chair. It is capable of holding two thousand persons.

In clearing away the earth for the new buildings in 1795 a Roman altar was discovered, two feet three inches in height and sixteen inches square, in a good state of preservation, of which we give an illustration. The inscription upon it is rendered and translated as follows by Dr. Whitaker:—

DEO SANCTO MARTI COCIDIO, VIBINIVS LVCIVS BENEFICARIVS CONSVLIS, VOTVM SOLVIT LVBENS MERITO.

"To the holy God Mars Cocidius, Vibinivs Lvcivs, a pensioner of the Consul, willingly fulfils his vow to a deserving object."

Cocidius is supposed to have been a British God with similar attributes to the Roman God Mars. The altar is now preserved in the Castle. At the south-west angle of the Castle enclosure stands a round Tower, attributed to the Emperor Adrian in the year 122 A.D. The upper chamber was used as a mill, and the lower one was called "John O'Gaunt's oven," from the existence of an oven there. This Tower is now cased round with ashlar, and until recently was used to keep the county records in before they were removed to Somerset House.

Between Adrian's Tower and the Gateway stood the "Dungeon Tower," connected by a curtain-wall, part of which, next Adrian's Tower, is still standing. This Tower was demolished in 1818, to make way for the new Penitentiary. It is supposed to have been fifteen hundred years old, and was composed of three stories. The bottom one was the dungeon, the pavement of which was of immense strength and thickness, composed of stones about two feet long and six or eight inches square placed close together on end and bound by iron clamps. This floor rested on a bed of marl three feet thick, and beneath the marl a great number of horses' teeth were discovered, as indeed they have been in other parts of the Castle. Several objects of antiquity were also found about twelve feet below the foundations. The two upper stories were used for female criminals, and one of them was called "Vinegar Hill."

Lancaster Castle has been used as a prison for malefactors from very early times, and within the last few years half of it has been used as a military prison; but this arrangement not having proved convenient, the military prisoners have been removed, and half the prison is consequently empty at the present time. Assizes are held at the Castle three times a year.

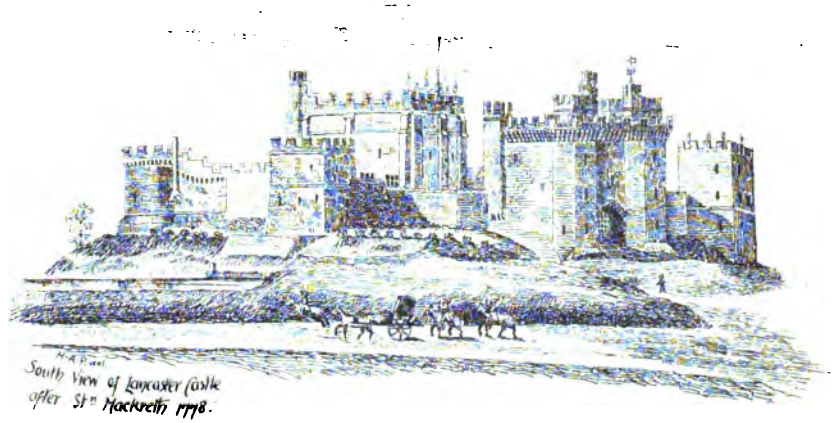
It may not be considered out of place to quote some portion of a mandate issued from Lancaster Castle by Henry VII. in 1485, and discovered after the records of the county had been removed to London. It commences as follows:—

"Henry, &c.,—To our right enterly beloved fader, Thomas Stanley, Knight, "Lord Stanley, and our well beloved Brethren George Stanley, Knight, Sheriff "of our countie Palatine and countie of Lancaster, and to every of theym "gretyng. For as moche as we pleyne understandying that divers the subgettes "of our cosyne James, King of Scottes, in great nomber and multitude ben in "full purpose to invade and enter this our reame, entendyng to leaye seege to "our Town and Castel of Berwik and the Townshippes and mansions of our "liege people of our marches there, to broune, wast, and destroye, and the same "our liege people there dwellynge to take, slee, and emprisone, and devoure, and "other noyauncc to do, as much as they cann, and maye trustynge to have aide "and favour at their comynge of divers riothose and evil disposed persounes in "thoes parties, &c., whom and whos malice we intend brifly to resiste and "rencountre, by the grace of Almighty God and help of our true and lovyng

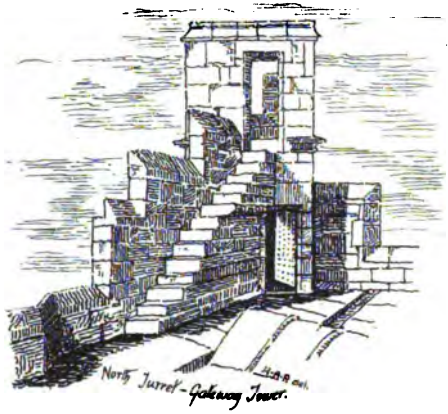
"subgettes. . . . . And over this we yeve straitly in commaundment "by theis presents, to al and singulre shireffes, maires, bailiffs, constables, and "al othre our officers, ministres, liegemen, and subgettes, whatsoever they be as "wel within franches as without, within our said countie, that unto you they be "attendant, assistent, behoying, and obedient diligently in all the premises. In "witness whereof we have dowe to be made thes our lettres patentes undre the "seale of our countye palatyne of Lancaster. Witnes myself at our Town of "Lancaster, the XV. day of Octobre, the first yere of our reign."

This letter from the King to his father-in-law, Lord Stanley, of Hornby Castle, and his sons, George and Edward Stanley, knights, is interesting both as showing the phraseology of the times, and also that Henry the Seventh was at Lancaster during the first year of his reign (1485), the battle of Bosworth having been fought on the 22nd August of the same year. The letter is dated the fifteenth of October, and bears the sign manual of Henry Tudor, affixed at Lancaster Castle.

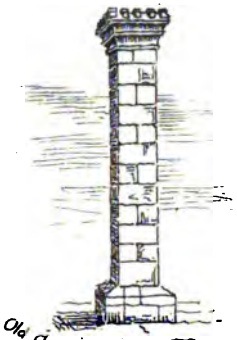
View of Well Tower. Gateway & Dungeon Tower from Courtyard. (circa 1778)



South View of Lancaster Castle after Stn Mackreth 1778.



North Turret - Gateway Tower.

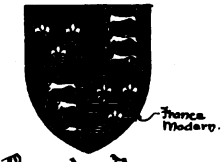


Old Chimney - Gateway Tower.

Steps to East Turret Gateway Tower.

Roman Altar found during Alterations at the Castle in 1795.

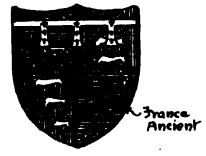
Shields on the Gateway Tower



Royal Arms: 1405–1603. (Temp. Henry IV.)

Prince of Wales' Arms. (Henry V.)

Arms of John O' Gaunt



as Duke of Lancaster

as King of Castile & Leon.

J. Akerman. Photolith London

A DRIVE THROUGH BULGARIA.

By PERCY SCOTT WORTHINGTON, B.A., Oxon.

After a varied and by no means uneventful journey through Austria by river, two of us were landed one morning at Orsova, the southern frontier town on the Danube. We had steamed down that great waterway from Passau, thus seeing perhaps the finest river scenery in Europe. Our goal was Constantinople, but, instead of taking the more usual route by Varna, we were to drive through Roumania and Bulgaria and join the railway to Adrianople as early as we could, for we did not know up to what point it had been opened for traffic. At Orsova we were already in the East, and both dresses and customs savoured more of Oriental than Western civilisation. But I propose to omit the drive from Orsova past the Iron Gates and through Turn Severin to Kalaphat, not because it was uninteresting—far from it,—but because Roumania has not the same interest at the present moment as Bulgaria, which, as an old Armenian we met expressed it, has "*toute l'Europe dans ses mains.*"

We slept at Kalaphat on the night of October the 13th, and here, being utterly ignorant of the language we should have to deal with, and unwilling to be swindled more than was inevitable, we enlisted the services of a little man who assured us that he had been to Sofia several times, and was intimately acquainted with the Bulgarians and their language, while he also spoke German. The next morning we crossed to Widin, once a place of considerable strength, but now possessing only a line of dilapidated Turkish fortifications. We landed at the town, and after our luggage had been examined at what was dignified by the name of a Custom-house, it was all piled on the back of one wretched porter, who

carried it to the principal inn of the place, while a second—a Turk, of course—carried a very small bundle of rugs as his share, and afterwards divided the spoil. At the inn there were two bedrooms and nothing to eat, so while our man ordered us some lunch at a café, we set off to have a look round the place. Widin is a regular Turkish city, and the population as unsavoury a mixture as could be found in a Sabbath day's journey, even in that part of the world. Turks, Bulgarians, Roumanians, Bashi-bazouks swarmed like bees in the filthy streets, and dogs, at which the lowest of English curs would turn up his nose, snuffed for garbage in the holes and corners. The streets are fairly wide and paved with cobble-stones, which form themselves into hills and valleys, necessitating strides from one summit to another in order to avoid splashing into the drainage which flows about in the hollows, and among which squat the inhabitants with the greatest contentment smoking their long pipes. Bazaars of one story, and all built of wood or of mud and wicker-work, line each side of the streets, where may be seen the products of Birmingham or Manchester—places which, however useful their goods may be, do not contribute much towards raising the taste of their customers in these parts. On each side of the street are rows of willows and acacia trees, shading the bazaars and roadway, and under whose branches the life of the place is carried on. We saw most of the principal streets, and not caring to "slum" in a place where the cleaner parts were too dirty for our English taste, we turned into the café and had something to eat. Before we had finished, our carriage drove up. Three horses replaced the four we had driven through Roumania, but they were the same small, wiry, sure-footed beasts that we had already learnt to trust implicitly over the worst of roads. Our courier was a Hungarian of good address and manners, but withal a very ineffectual little man. He wore long drooping moustaches and light silken whiskers upon a flabby little face, and was clad in an irreproachable suit of brown clothes and the thinnest of thin boots. The latter probably accounted for his dislike of walking over Bulgarian roads, and for his remark one day as we were easing the horses up a very stiff bit

of hill, "Ah! the gentlemen are so light of foot," and spreading his hands out, with a simper, "I *never* could walk." It soon turned out that he had never been to Sofia at all, neither could he speak a word of Bulgarian. However, as most of the Northern Bulgarians speak Roumanian, we did not find the pious fraud out until we had left Lom Palanka.

The road leads out of Widin on to a broad plain, where large herds of oxen, horses, and goats grazed at will upon the parched brown grass, and where the bones of the patient oxen abandoned to die by the way lay bleaching in the sun, whilst further afield huge birds of prey hovered, fighting over like savoury morsels. There was at once noticeable a difference between the people of this country and of that we had just left. For while the white clothes of the Roumanian as well as his person are nearly always clean, those of the Bulgarian are seldom so. He looks dirty and scrubby, his physique is not nearly so fine as that of the Roumanian, and he bears unmistakable marks of the long oppression at the hands of the Turk from which he has but now escaped. His dress is much less picturesque than that of the descendant of Rome, nor has it the same uniformity or simplicity. The clothing is still made of thick white cloth, and consists for the most part of a long garment reaching in the form of a skirt to the knees and gathered in at the waist by a girdle, in which he carries his portable arsenal. Over this is a short jerkin coming down to the waist, made usually of sheepskin, while the legs are more often covered than bare, and are either swathed in cloth fastened with straps wound round the calf, or clad in the inexpressibles of civilisation. There is a change, too, in the beasts of burden. Where the grey meek-eyed oxen drag the carts they are of a much smaller breed than those used in Roumania; but for the most part the black buffalo is used, with its wearied, pained expression, and great broad horns curling back into its massive neck. Agricultural life may be seen in plenty—a wandering, nomad existence like that of the *vagæ Scythæ*, carried on by father and son from time immemorial, as in the days when Joseph's brethren fed their father's flocks in Shechem. A patient, hospitable

race these Northern Bulgarians, except when roused to anger or spurred to revenge by brutal ill-usage. The so-called atrocities perpetrated by the Bulgars against their oppressors were, it must be remembered, the outcome not only of like atrocities committed at the time by the Mussulmans, but of centuries of greedy and wanton cruelty, and of systematic outrage of all that a people or family holds most sacred; while brigandage, lately so rife both in the Balkan Peninsula and in Greece, must also be attributed to Turkish misrule, which drove persecuted subjects into the hills, where they might combine to resist oppression and live by illegal where legal means were denied them. As we fared further, and found a Turk to drive us at Lom Palanka, we saw that Bulgarian wrath could be aroused; but for the most part the people seemed strangely passive at the hands of their old tyrants, a fact which our driver knew and thoroughly appreciated.

But to return to the earlier part of our drive. As the road again neared the Danube, which here flows in broad majestic reaches, we ascended some rising ground where the autumn colouring was most lovely, and where browsed flocks of wanton goats, some climbing the young trees to reach the tender growth or "hanging aloft from the shrubby rocks," others following the goatherd and answering his pipe by the musical tinkling of their bells. At about five o'clock we reached a solitary farmhouse, where we stopped to feed the horses; so, while they were eating to their hearts' content, the old man of the house gave us some black bread and coffee—of course Turkish—and some good wine. Coffee, wine, and black bread form the staple food of the country, but nothing else is to be got by the way, so we were, of course, obliged to carry our food with us from Lom. As we stood outside drinking our coffee a gendarme galloped up—a fine tall fellow, and the son of a farmer. Our hospitable host would only accept about 4d. for four cups of coffee besides wine and bread, and after drinking to Bulgaria we shook hands warmly all round and once more started. We soon left the so-called road altogether and took to a mere track, now following the river bank, now over broad

unbounded meadows. At one time the horses made a rush down into a stream, where they would flounder for some minutes, unable to move the sinking wheels, or galloped over a bridge of logs loosely laid crosswise upon two bearers in which time rather than traffic had opened yawning chasms, which we took at a bound. At another we sank so deep into the spongy turf that we were obliged to walk in order to ease the horses. But soon it began to grow dark, and with sunset came a tremendous storm of driving wind and rain that pelted down upon the capacious hood which protected us entirely. But now the road became worse than ever. The wind and rain whistled around; underneath us the carriage was tossed up and down and from side to side like a cockle-shell in stormy water, while we were tumbled against one another or got our heads banged against the back of the carriage as we careered suddenly downwards. The track often lay in the beds of watercourses, where the horses splashed along at a labouring walk, while the wheels sank deep into the sandy bottom, and where, as there was only just room for the carriage itself to travel between the high sandy slopes on either side of the channel, the outside horse was obliged to walk high on the bank. Here he was at about the same level as the box, looming above us like a phantom in the darkness, and from this eminence he would frequently come down with a run as the sand slipped from under his feet, or would get his legs entangled in the traces, which would then become detached from the carriage, and were only put right after much plunging and struggling.

We travelled slowly along such roads as these until at about eight o'clock we found ourselves in the straggling village of Lom Palanka, one of the chief ports of Bulgaria on the Danube, and from which place most of the trade with Austria, Germany, and Roumania is carried on. A long flight of steps led from the road up to the hotel, and after wandering round for some time, we at last found our way into a long bare room where a number of Bulgarian officers, who had been on a commission to buy horses in Hungary, were supping or playing cards. We had a very good supper in the large room, and took stock of the officers round us. Whatever the fight-

ing power of the Bulgarians may be, their appearance is not as a rule striking. The officers are very small, and some of these seemed ridiculously young to be sent on any sort of responsible commission, while their flat caps gave them to our notions more the look of bakers than of soldiers. Meanwhile our courier had gone in search of horses to take us to Sofia, and soon came back in great glee, saying that he had engaged the best driver in the place. Then, leaving him to provide for the necessary food to be carried with us, we turned in, too tired not to sleep in spite of our crowded quarters and the liveliness of the beds. At about six o'clock the next morning our carriage made its appearance—the same low, strongly-built kind of conveyance that we had travelled in from Orsova, but more capacious and provided with a larger hood. There was one thing in which it differed from any carriage we had yet seen in these parts. It had been cleaned quite recently. Four horses were harnessed to it, arranged as in a Greek chariot, four abreast, and verily they and the Turk their driver would have given Automedon himself no small trouble in the Stadium. The Turk was a wiry man of middle stature and gaunt, forbidding aspect; a narrow black bandage worn across his right eye gave him an extremely sinister expression, and was evidently the result of strife much later than the Turco-Russian war, in which he had fought and helped in the defence of Plevna. He was a wealthy man, and besides owning a carriage and capital team of horses, was a landlord at Widin, while he resided at Lom. We felt therefore quite honoured to have so distinguished a driver, though at the same time his appearance was rather calculated to cause misgivings, and it did not seem a bad move on the part of my fellow-traveller to display a bright "six-shooter," with six pretty little cartridges housed therein, for he was a man with whom a quarrel would have been dangerous. He was, like most Turks of his class, dressed in brown trousers, a blue shirt with a broad girdle of red cloth, and a short brown jacket, while a fez covered his head and loose slippers his sockless feet.

The luggage was strapped on behind and we were soon off,

scattering pigs, dogs, and children right and left as we galloped down the street of Lom, now alive with soldiers and gendarmes, buyers, sellers, and loafers—the last, of course, being by far the most numerous class. The place was full of soldiers, and we began to see, what we noticed all through our drive, that the Government, under the energetic Stambuloff, are by no means letting the grass grow under their feet. Cavalry and infantry were drilling, the roads were being improved and in many places altered to obtain easier gradients, bridges were being built, and the railway is being pushed on, and will before long be completed from Constantinople to Belgrade, through Philippopolis, Sofia, and Nisch. Gendarmes, patrolling the northern roads, are about in plenty. These officers of the peace are a kind of Bashi-bazouk, maintained by the local authorities. They may be met riding two or three together, mounted on horses as ragged as themselves, and armed to the teeth with weapons just as miscellaneous as their garments, their duty being not only to prevent brigandage and disturbance, but also to put a stop to emigration across the Danube into Roumania. Leaving the town under one of the triumphal arches erected at each place along the route of Prince Ferdinand's progress, we soon began to rise towards a high tableland, passing at a gallop some soldiers escorting prisoners to Sofia, a sight frequent all along the road, some of the poor wretches being driven along on foot, others tied on the rough country carts. We soon realised what manner of man our Turk was. His driving was as the driving of Jehu the son of Nimshi; but there was a method in his madness. Our programme for the day was as follows:—We started at about half-past five, and having had coffee before starting, we took our *déjeuner* at about eleven o'clock, after a rest and feed for the horses about three hours after leaving our night quarters. About an hour and a half or two hours were allowed for the midday meal, and two stops after this carried us on for the rest of the day. During each of these rests the horses were allowed to eat as much as they would, and between them we seldom went at any pace but a gallop. Uphill and downhill the same break-neck speed carried us over the ground

at a tremendous and exhilarating pace. We soon came to have entire confidence in the Turk, and as we almost shrieked with delight at some piece of driving more reckless than the last, he would look down with a patronising grin (for we were Giaours) and drive all the faster, curling his whip round his head, at the very sight of which the sixteen legs moved faster and the long tails flew straighter, while objects on the road passed

Swift as a shadow, short as any dream.

The road from Lom to Sofia is broad and well defined, but could not be called good; indeed, in parts it was just as bad as the one we had traversed the night before. We were soon travelling along a high plateau bounded on the south and west by the Balkan and Stairan ranges; but the country, with the exception of the distant view with beautiful cloud effects upon the mountains, was uninteresting. One interminable rolling plain was all that could be seen around, covered entirely with scrub except just round the few villages where the maize stalks were standing, while the only living creatures besides the occasional trains of buffaloes and their drivers were the magpies and hooded crows which flew about among the scrub. The soil is extremely rich and fertile, and will no doubt, with a settled government and a feeling of security, yield abundant crops. Near the villages ploughing operations were in full swing, and the quaint old wooden ploughs, corresponding almost exactly to Virgil's well-known description in the First Georgic, were being dragged by two or four oxen, whose laggard steps the shaggy Bulgar tried to hasten with shout and pointed goad. The chief material for building is of course wood, which is used even to the chimneys, on the top of which might sometimes be seen great round nests, now deserted by the storks. Where timber is not the only material the walls are either built of rubble and mud or of a rough framework of cross-beams filled in with wattling and plastered inside and out with mud. The roof is either tiled or covered in with square pieces of wood about an inch thick, while in

front of the houses a verandah or shade of some sort is indispensable even when the building is partly under ground, as is frequently the case. Each house is, as a rule, surrounded by a mud wall forming a yard for the cattle, at the entrance to which would be hung the skulls of horses or oxen as a charm against the entrance of evil spirits.

Our first long stop after leaving Lom was at a small village called Koutlovitza. As we approached an air of excitement seemed to pervade the place, which was swarming with soldiers and gendarmes, and from inside one house, guarded by sentries, a number of ruffians peered through the barred windows, attracted, as everyone else seemed to be, by the tinkling of our bells as we tore down the street and pulled up short in front of the inn. By this time we were decidedly hungry, and, sitting down in one corner of the common room opening into the street, began incontinently upon a very tough chicken and a bottle of the country wine, the proportions of which would have shocked our friends at home. Plenty of life was going on round us. Outside was a group of Turks, with whom our driver made friends, and drank his coffee in the shade. He seemed to eat nothing, while he drank like a fish at every station, refusing nothing but water, and besides consuming about twenty-four cups of the orthodox coffee in the day, he would drink as many more glasses of wine or spirits, in spite of the Koran. Much of the excitement which I mentioned before seemed to centre round the inn, and our attention was attracted by what was going on at the other side of the room. Two officers and two extraordinary men, who were evidently doctors, were seated round a table in solemn conclave, while Bulgarians in their dirty white clothes came in one after another to be examined by the officers and have broken heads and arms prescribed for by the doctors, who made notes and probed the wounds with pencils. There had been an election row here on the preceding Sunday, when the Russian party had cleared the polling-booths and attacked the Prefect in his house. He defended himself with gendarmes as best he could, but

the doors and windows were being already torn down when some officers of the Hungarian Commission, coming up just in time, killed about twenty of the peasants and rescued the imprisoned Prefect. These men were sufferers in the fight, and gruesome sights many of them were.

We finished our meal, and once more went out into the blazing sun. Passing a ruined mosque, we continued our way, which still lay across the plain, though the Balkans by this time looked considerably nearer. Occasionally we met trains of creeping waggons or passed bivouacs among the scrub, where in a clear space the waggons would be ranged round the fires, and their drivers, basking upon the ground in the sweltering sun, would raise their heads and stare at us as we passed. We stopped during the afternoon at a small cottage where they gave us coffee and delicious fruit, and from which we watched the toilsome progress of some prisoners who were being driven under escort to Sofia. After leaving here the scenery began to improve—a stream babbled by the road and larger trees varied the monotony of the landscape. But with the increasing interest of objects around, the road became proportionately worse, until we were obliged to leave it and take to the fields, which were not much better, but where the obstacles were of a much larger nature. We crossed hollows, mounds, streams, ditches, until it seemed that the carriage could hardly hold together or we hold on to it; but the Turk drove gaily over places to avoid which a civilized coachman would have gone miles out of his way. He was lively after his "schnapps" at the last halting place, and drove furiously, shouting at his horses all the time, until when we left the fields and emerged on to a worse piece of road than before, we could stand it no longer, and told him to slacken in order that we might walk. Just before sunset we entered Glissura, a little village at the foot of the Balkans, and drove up its steep street at a gallop, with pigs and poultry tumbling among the horses' legs. We were to sleep here, and alighting in the inn yard, which was a mass of mud and filth, were ushered

into the house by the landlord, a very superior specimen to most of his class along our route. The first impression was not reassuring. The steps into the house led across a brook into a dark hole which was, as far as we could see (for it was growing dusk), the kitchen. From the large room a tumble-down staircase ascended to the first floor. Here a charming surprise awaited us. Instead of the dirty, uncomfortable place we expected, we came upon a room or landing running the whole width of the house, and projecting over the street at one end by means of a balcony which was entirely open to the air. Here were arranged plants and flowering shrubs in boxes, and on each side, in accordance with the general plan of the better houses, opened the bedrooms—three in all—whose walls were adorned with mats upon which were painted lions, tigers, and many another "*monstrum horrendum, informe, ingens.*" The door of our bedroom would not lock, but on inquiring for some means of securing ourselves we were given a wooden spoon, which we used as a bolt through two staples.

Before it became quite dark I went out on to the balcony to see what was possible of the place. Like most Eastern villages, it would have required a Hercules to cleanse it; but the wooded Balkan slopes formed a background of glowing colour to the picturesque street with its tiled roofs and white walls, while the balconies were bright with flowers; and as the shades of evening fell longer and longer and shadow deepened into night, they were lighted up with hanging lamps which swung gently in the breeze as glowworm pendants in some dimly lighted mosque. We had a delicious meal, chiefly consisting of trout caught in the stream which flowed under the inn, and cooked to perfection. While thus engaged we heard that another Englishman had arrived, on his way from Sofia to Lom. He joined us later on upon the balcony, and we spent a very pleasant evening over our pipes and wine and a kind of liqueur made from raspberries, for which the place is famous. He was secretary to the English Consul at Sofia, and while we could tell of English news, he

gave us much interesting information as to the country we were in, and, among other things, amused us greatly by telling us the true version of Mr. Legh's adventure with brigands on the Macedonian frontier, which had when we left England only appeared in the papers in its sensational form.

The next morning we were called at half-past four, and as I lay for a few minutes looking out of the window before plunging into the cold candlelight, a girl in night attire emerged from the house opposite and walked on to the projecting balcony, where, after trimming the lamp, she stood for a minute, as though looking for some Romeo in the street below. She was under cover, but it would have required more ardour than most Romeos would have been guilty of to wait about, up to his ankles in mud, at five o'clock on a wet November morning. The usual cup of coffee and we were off, well wrapped up and protected by the hood from the rain which fell in torrents. The road began to ascend at once, following the stream, and before long we were in the midst of the most gorgeous scenery. The whole of the northern slopes in this part of the Balkans is covered with one mass of magnificent old beech trees, now in their autumn dress, so that from top to bottom the mountains appeared one sweep of gold, the foliage often meeting over the road, which wound backwards and forwards, now keeping along the side of the stream and now crossing its ravine on high bridges. At four thousand feet we were looking down upon a sea of mist, with the lower tops emerging like islands from its shifting masses, and at five thousand feet all vegetation stopped. Soon after we were at the cold, bleak top, after a stiff climb—for we had walked for about three hours,—and at half-past nine we were warmly ensconced in a hospice, with our wet clothes drying before the stove and a rosy-cheeked Bulgarian child playing round us as we ate one of the most grateful meals I ever remember.

When we started again it had cleared up, and we were all in capital spirits, the Turk, who had been drinking schnapps and coffee, being livelier than any. He began the descent at a gallop, having a cut at everything that came within the circle of his

unsparing lash; a cut for a Bulgarian, a jest for a Turk, and a flip behind for a packhorse or buffalo were his receptions for anything we passed on the road. Faster we drove and faster, helter-skelter down a road more like a watercourse than a highway, until we came to a precipitous hill-side, where the road zig-zagged backwards and forwards, at each turn doubling on itself. Here we thought we must surely slacken, especially as the road was filled with a train of half a dozen buffalo carts. But no. Yelling at the drovers to get out of the way, the Turk still pursued his headlong course, taking his horses right over a pole that projected from the back of the last waggon, which was itself only just clear of our wheels. "*Er fährt wie der Teufel,*" murmured our agonised little courier, as he held on like grim death to the sides of his box seat. I held my breath until we were clear of the line of waggons, but no sooner were we past than something had gone wrong, and one of the outside horses was galloping loose with the traces about his heels. The Turk leant back until his head nearly touched ours, his teeth set, the reins wound round his hands, and just before coming to the sharpest turn he brought the horses up on their haunches. The iron by which the horse was attached to the axletree of the back wheels had broken the fastening and was dragging among its legs. With an English horse in the same position nothing could have saved us; but the Bulgarian beast, with a cleverness of which we had still more striking proof directly afterwards, kept both its legs and its head. The next turn was the sharpest we had as yet encountered, and, driving at such a pace, we only just escaped going over the low wall which formed a sort of parapet to the slope below. As it was, the outside horse, to prevent having his legs crushed—for there was no room for him in the road,—cleverly mounted the wall, which was about eighteen inches high, and after a few steps up there descended to the road again when we had swung round sufficiently to admit of his doing so. At about four o'clock, as we topped the last outlying crest of the range we had crossed, a marvellous panorama unfolded itself before us. A long narrow plain stretched below us to the east and to the west, until the mountains that completely surrounded it

faded into a shimmering haze of heat. In the centre of the plain to our left lay Sofia, its white houses flashing gem-like in the sunshine, and above the city towered a massive mountain, forming part of the Balkan wall, with a dark, impenetrable cloud upon its summit which cast long purple shadows across the plain. Sofia looked quite close to us in the clear air, but it was only after three hours' driving across the monotonous plain that we crossed a Turkish bridge into absolutely the filthiest street we had seen anywhere. The place would have been pleasing in its picturesqueness had it not been revolting from its squalid dirt and disgusting smells. The houses looked decayed, the mosques were ruined, and it was not until we emerged from the old Turkish town into the modern quarter that we saw anything to distinguish the capital from other villages that we had passed. All the same, the scene was a lively one. Women and children in bright dresses were drawing water at the springs, and sturdy peasants drove flocks of sheep along the crowded streets, while plenty of life was to be seen in the bazaars on either side. The town was full, for the elections were to be held the next day. In the hotel, which is close to Prince Ferdinand's palace, we found ourselves in very comfortable quarters, and as it was growing dark we had our supper in a neighbouring café and went early to bed, not sorry to have a quiet Sunday before us in which to rest ourselves and the horses.

When we inquired next morning about the elections, we heard, much to our disgust, that the polling was all over, for we had hoped to see something interesting. However, the work had passed off without a hitch, as M. Stambuloff had intimated to his chief opponents that they must consider themselves the guests of the Government for the day, and pouncing upon them had placed them in durance vile in order to ensure a quiet poll and satisfactory result. The event fully justified his calculations. Part of Sunday morning we spent in looking round the old part of the town, which, though extremely picturesque from points of vantage outside, did not improve on nearer acquaintance. It was amusing to see men cleaning their feet and heads at the corners of the streets, where

running water continually flowed from iron spouts, and to watch the shaving operations in the barbers' shops. As a rule the streets were most uninteresting, except for their gay and motley groups. Each trade keeps as a rule to its own quarter. The butchers' street was a gruesome sight, with its carcases hung outside the bazaars that nearly met overhead, leaving scarcely room to walk along between them. In an open space where Russian carriages stood for hire was a gorgeous shooting gallery. Should we shoot or go to church? It was just time for service, and we chose the latter; so, finding our way to the Greek Church, where Prince Ferdinand was expected, we watched with interest the gorgeous ritual. The music (entirely vocal) was harsh, but suited the place, and the rich sonorous voice of the priest filled the church until it was interrupted by the dropping of coppers into the collection plate—for nobody gave more than a penny, and if he had none, put a larger coin into the plate and took change from it. We could not help hoping that they were all honourable men. But the Prince tarried, and we did not see him until the afternoon, when he took a walk in the public park, accompanied by a few others and attended by a gorgeous creature in a salmon-coloured uniform. The Prince himself was in uniform, but did not look as if he could set the Thames or even the Iskar on fire, though he forms a good figure-head, seems extremely popular, and makes high-flown speeches. Large new buildings are being built in the higher parts of the town, a public park has been laid out in front of the palace, and the new station—which when we were there was unfinished—has, I believe, now been completed, and the railway opened into it for traffic. In fact, everything seems to bespeak energy on the part of the Government, and a disposition to order and efficient self-government, if it is only allowed from outside.

At half-past five the next morning we were off again, knowing that we had a long journey before us if Tatar-Bazardjik was to be reached before nightfall. The Turk was not so lively as usual. He had only slept for an hour, and confided to the courier that, as his visits to the capital were few and far between, he had been making

the most of his stay. It was dark, cold, and wet; but by the time we reached a few houses and a ruin called collectively Nooverhau it had cleared beautifully, and we had our breakfast at a table which they put in the sun outside the inn. After breakfast we were examining a map, which seemed to attract several peasants who were hanging about, and who after gazing at a distance approached shyly. They were very much interested when it was explained to them through the medium of the courier and the Turk, and greatly astonished when England—an *ultima Thule* to them—was pointed out as the place from which we hailed. Seeing some red pepper pods hanging in strings upon a cottage to dry, I intimated that I should like to have some, for, having burnt myself severely with the pepper at Sofia, it seemed good to take some home for the benefit of my family; and when my fellow-traveller explained that I wished to administer a dose to my aged father, there was a roar of laughter, and they all set off to get me some. Here we saw nearly the last of the plain of Sofia, which is about one thousand eight hundred feet above the sea, so that we had nothing like the climb before us that we had on the northern range. Moreover the range to the south of Sofia is not so high as that to the north, and in the middle of it is a high tableland surrounded by mountains, over which we must have travelled for about three hours. For a long way we followed the new railway works, which were then opened for goods traffic only, to within about six hours of Sofia, and a long drive over rich but comparatively uninteresting country brought us to Ictiman. Here we waited two hours, and had plenty of time to look round the sunny little village. The women sat on the doorsteps or moved about with their distaffs, and the children, clad only in a loose white shirt hanging straight from the shoulder down to their ankles, played about in the street. We went into a pottery, where a tall good-looking youth was drawing out the clay into large well-shaped vases, as he turned his wheel by working a lower disc connected to the wheel with his bare foot. He was remarkably clever at it, and specimens of his work lay round him in heaps upon the ground. It was rough, of course, but the shapes were extremely artistic and the

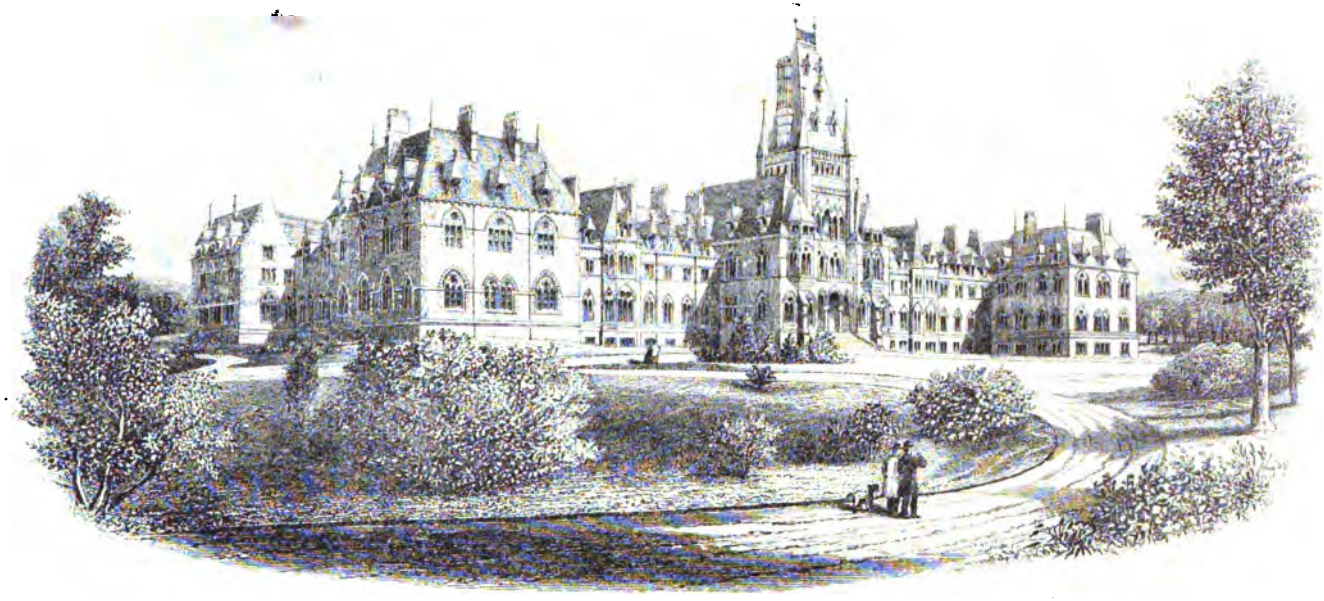
colouring rich. In the smithy the oxen were being shod, and, in spite of the blistering heat and tormenting flies, we stood for a while to watch the process. A stout pole is pushed in between the animal's legs, so that it stands with its left legs on one side and its right legs on the other of the pole. All four feet are firmly lashed to it, and the beast is thrown to the ground, turned on its back, and its head fastened to an upright fixed in the ground. The smith then comes and nails iron plates to each half of its cloven hoofs, regardless of the poor brute's helpless struggles. We had another stiff climb before descending to the plain of the Maritza. The descent lies down a fine gorge nearly the whole way, and it did not take us long, as we went at the same pace as before, and down places just as bad. But some of the hills were fearfully steep, and that one of them was pretty bad will be evident from the fact that the Turk thought it necessary to use an apology for a break, which he worked by a wheel under his feet. It took some minutes to screw up, and had to be wrenched away from the wheel by tools which he carried with him. At the bottom of the pass we were in Eastern Roumelia, and at once an improvement was visible in both villages and people. We stopped for some time at Vitren, just at the foot of the hills. The village was picturesque, the women pretty and dressed in coloured dresses, aprons, and beads, and the men of much more civilized appearance than further north, all wearing Turkish or semi-Turkish clothes. It was the time of the grape harvest, and the oxen, with their painted foreheads and beaded horns, dragged the creaking waggons into the town, filled to overflowing with a purple wealth of grapes, and surmounted by a tripod of branches wreathed with ivy and vine leaves. The inn was filled with peasants in their sheepskins, which so impregnated the air of the room that we were obliged to take our coffee outside on a stone bench, whence we could watch the busy throngs in the street. A group of men and laughing girls crowded round a waggon in which the grapes were being trodden. A man, his legs bared to the thigh, waded knee-deep among the grapes, until the must flowed in a continuous stream of no very inviting appearance from the bung-

hole in the back of the waggon, and was caught by a vat standing in the street below. While we were strolling about, the Turk, whose motto seemed to be "*nunc est bibendum*," had been carousing with some newly found acquaintances, and when we started again he was far from sober. He drove down the street like a madman, causing everyone to run and stare while he jested facetiously with the courier, whom he saluted with a chaste kiss, much to that gentleman's astonishment and dismay. Once more on the flat, we drove on and on long after it became dark, passing bivouacs of waggons, where shadowy forms flitted about the fires which lit up the encampment with a fitful glare. The driver did not know the road, and peered anxiously round into the darkness and rain, which had begun to fall soon after sunset, until at about half-past eight we arrived at a lonely house by the roadside. Everything was dark and silent. The Turk got down, and knocked and hammered at the door. At last it was cautiously opened, and after a short confabulation he went in, leaving us to stand in the rain. When he came out he was in despair and very sulky, for it was, he said, still 26 kilometres to Tatar-Bazardjik, the road was dangerous, and he could go no further. We were to catch the train at Tatar-Bazardjik the next morning, and though we did not know at what time it left, it must, we were certain, be early. But the horses must rest and feed, for we had come at least 110 kilometres since morning; and so, with a young Bulgarian to light us with a lamp, we drove round into what proved to be the yard of a caravansary. We went into the place, and were shown into a large room, with the usual raised platform for sleeping and sitting round two of its sides, a concrete floor, and no furniture except two small wooden tables. In a huge fireplace smouldered the embers of a fire, and a dim oil lamp hung from a beam, by whose insufficient light we could distinguish a big burly peasant snoring in his sheepskin, and an old man rocking himself backwards and forwards while he mumbled and grumbled to himself, evidently not in the sweetest of tempers at being disturbed in his slumbers. They made us some coffee and brought out a pitcher of must, and with these and a little bread and so-called butter which

we had kept by some happy chance we satisfied our hunger. At about half-past ten we broached the subject of setting out. Both Turk and courier made objections, but my fellow-traveller insisting, the former went out with a very bad grace to put the horses in. However, we heard no more of him. Twice the courier went out to look for him, and twice returned to say he was nowhere to be seen. So at last we all sallied forth in the howling wind and rain, with the young Bulgarian to hold the lamp, determined to find some solution to the Turk's behaviour. No Turk, no horses—only the carriage, with our luggage getting soaked behind. We shouted and searched with no result, until, going up to the carriage, we felt something inside it, and there, sure enough, wrapped up snugly in rugs under the hood, lay the man fast asleep. We pulled and pushed him. No effect. We took down the hood and wheeled him about in the rain. Still no effect, save a few grunts. There was no moving him, for he was as obstinate as a pig, and the amount of liquid taken during the day had evidently told upon him, hardened sinner though he was. So there was nothing for it but to let him sleep for a while, and after extracting a promise from him to start at two o'clock the next morning (it was now about half-past eleven in the evening), we went back into the room, and, lying down on a thick rug they gave us, with our coats for pillows and a revolver handy, we tried to snatch a little sleep, though there was a feeling of uncertainty about the situation which, if it added interest, lessened the inclination to sleep. But two o'clock came. Everything was ready, and we started in the cold and dark on the last stage of a most interesting journey. After about two hours' drive we entered Tatar-Bazardjik, dreary and deserted in the early morning.

As we wandered aimlessly about over the bouldered streets, and were thoroughly awakened by the fearful jolting, we came across a butcher hanging out his carcases by lamplight, and, directed by him, found our way to the hotel, which was all shut up. But we found a man there, who walked with us until we were beyond the labyrinth of narrow streets and on the straight road across the Maritza to the station. There we had some time to wait for

the train, and got some grateful tea and biscuits at a café hard by. The dawn rose in all its splendour, flooding the east and painting the Balkans with a rosy glow, and at half-past six we bade adieu to our two travelling companions, really sorry to part from our driver, who, with the exception of the last night, had behaved exceedingly well and been perfectly straightforward with us, and whose dare-devil driving we had thoroughly enjoyed.



THE ROYAL ALBERT ASYLUM, LANCASTER.

THE ROYAL ALBERT ASYLUM AND ITS WORK.

By HENRY R. HUTTON, M.A., M.B., Cantab.

In name at least the "Royal Albert Asylum" must be familiar to all the old boys of Mr. Davis's School who were at Lancaster in 1865 and onwards.

Some remember how the scheme was first started; others, like myself, watched the great pile of buildings rise slowly week by week; while those who were at school in the autumn of 1870 saw the completion of the six years' labour and the commencement of the real work of the Institution. Many important additions have been made since then, both to the grounds and buildings, and others are now in progress, but none the less was it the autumn of 1870 that saw the Royal Albert Asylum start on its great career of usefulness and charity.

The history of the origin and foundation of this great training school has often been told before, and told in much greater detail than is possible or even advisable here; nevertheless some brief sketch of it is necessary since we, who were at the school after 1865, form but a small portion of those into whose hands this volume will come.

Already in some foreign asylums, and in England at the Earlswood and the Eastern Counties Asylums, the possibility of in some way improving the condition of imbeciles and idiots had been recognised, and the idea of doing something for them in the northern counties also led Mr. James Brunton, of Lancaster, to offer £2,000 towards the expenses of renting and maintaining a small home for them in Lancaster.

To Mr. Brunton, therefore, belongs the credit of having given

definite form and reality to the ideas and wishes which he had no doubt shared with many other generous-minded men. When it is remembered that Mr. Brunton was by no means a rich man the mere money value of the gift becomes remarkable and worthy of the great results to which it led.

The modest scheme was laid before Dr. DeVitre, consulting physician of the Lancaster County Lunatic Asylum, and by him developed after much thought and enquiry into a much bolder and more comprehensive project.

A public meeting was held on the twenty-first of December, 1864, and a committee formed to further the objects of the charity. The work was carried on with great energy. Local committees were formed in the chief towns of Northumberland, Cumberland, Westmorland, Durham, Yorkshire, Lancashire and Cheshire (the counties which were to benefit by the scheme). A site of forty-two acres was secured, and in less than three years building operations were commenced.

Three years later, in the autumn of 1870, about two-thirds of the building as originally designed was ready for occupation, and it was determined not to wait for the completion of the remainder but to commence operations at once. The whole structure was finished in 1873. Comprehensive as was the original plan it was yet found, as the work of the institution went on, that certain things were wanting, and these have since been added.

A little infirmary, complete in itself, now stands in the grounds; cottages for those engaged on the estate have been built, together with farm buildings; and last, but not least, a large hall for concerts and other entertainments, with a covered play-ground underneath it, has just been completed and opened. Furthermore, as experience proved how suitable agricultural occupations were for the stronger and more highly educated of the inmates, the land adjoining the asylum has been bought up as opportunity offered, and the whole estate now covers one hundred and five acres.

The site selected for the asylum is the high ground on the left hand side of the Cockerham road, about a mile from

Lancaster, just beyond the Ripley Hospital, and on the other side of the high road from it. A site commanding more extensive or more lovely views of all that in nature is most beautiful could hardly have been chosen had the building to be erected been intended for the home of painters and other lovers of nature instead of for the temporary home of those to whom the possession of a mind had almost been denied.

Yet this very matter of choice of situation is a good illustration of the wisdom and thoughtfulness that have characterised all the doings of the Asylum Committee, for if, as is well known, beauty of sound exercises so great an influence over the feeble-minded, surely beauty of form and colour may also be made to appeal to them. No matter in which direction we look the view is beautiful. To the north and north-west lie the great mountains of the Lake District, conspicuous among which are Helvellyn, Black Combe, the Langdale Pikes, and the Old Man of Coniston; to the south stretches the great plain of the Fylde district, the favourite haunt of the naturalist and sportsman. Eastward is Ingleborough, and the spurs of the Pennine Range that lie beyond the Forest of Bolland, while to the west, in front of the Asylum, the broad estuary of the Lune winds round to open into Lancaster Bay, with Morecambe Bay extending far to the north-west and the open Irish Sea stretching away to the horizon. Standing as it does on the high ground, with the open sea but a few miles distant, the asylum enjoys the very valuable blessing of pure and bracing air, loaded with ozone whenever the wind blows from the west.

The situation has also rendered perfect drainage easy, while for water supply the main which supplies Lancaster has been tapped above the Asylum, and at a considerably greater elevation.

Nothing is wanting which could add to the natural beauty and healthiness of the site, and here has been erected a building in keeping with its surroundings. The style of architecture is described as being "domestic Gothic of an early type," and the stone used is the hard light-coloured free stone found in the neighbourhood.

The building consists of a central portion surmounted by a lofty tower and two wings, while from behind the central block a long corridor runs ending in another smaller block.

The central feature is the spacious and lofty dining hall (De Vitre Hall), capable of seating three hundred patients. Behind it are the kitchens, fitted with the most modern cooking appliances, and the various workshops, while above the workshops is the necessarily extensive laundry.

On the first floor are large airy dormitories, for girls in one wing and for boys in the other; light cheerful schoolrooms, and along the corridors smaller rooms in suites for private patients and their attendants.

The main characteristics of all the rooms are airiness and cheerfulness, the one being as necessary for the bodily as the other is for the mental health of the inmates. Though for the sake of efficient ventilation and cheerfulness open fires are used freely, heating by hot water is also necessitated by the great cubic capacity of the rooms and the proneness of the children to suffer seriously from the effects of cold.

Throughout every department there is abundant evidence in the carefully guarded fires and windows, the plentiful supply of apparatus for extinguishing fire and the like, of the utter helplessness of the bulk of the patients, giving visitors the feeling of walking through room after room of one vast nursery.

In strange contrast to this are the workshops, and nothing perhaps in the whole place impresses one so much with the patients' capacity for improvement and education as the sight of these workshops. Here in the several shops of the various trades—tailors, carpenters, bootmakers, bakers, upholsterers—are all the tools usually employed by healthy right-minded artisans—knives, needles, saws, axes—all lying about freely and being freely used by the patients according to their calling. And yet the risk is only apparent, for the tools are no more dangerous in the hands of these half-witted children than they are in those of other children of like age, for idiots and imbeciles, unlike those suffering from other forms

of insanity, are not subject to fits of violence unless greatly provoked.

Separated from the main building is the new recreation hall. On the basement is a large playground, and above a concert hall with a raised stage at one end and a gallery for the accommodation of visitors at the other end. Across the road and outside the asylum grounds proper are the farm buildings and farm house, where, under the care of the bailiff, live those patients who are now able to earn wages as agricultural labourers.

And now to turn to the real subject of this paper, viz., the training of the inmates of this great establishment. The terms idiot and imbecile are applied to those in whom there has been arrest of intellectual development or imperfect development either from birth or from very early childhood, and thus exclude all the forms of insanity arising later in life. The whole object and work of the institution depends upon this fact, that the minds and intellects of the patients are only arrested in their growth and development and not perverted or destroyed after they have attained their full growth.

It was thought that such intellects might be capable of further development by careful and suitable training in the same way as an ordinary child's mind is trained, and that as the muscles of a healthy child are brought into play and strengthened, so might those of the idiot by well-conceived and carefully-directed exercise.

That these were not over sanguine views the results obtained in the institution have conclusively proved, although to a stranger the material seems unpromising enough. In so many instances is bodily deformity and arrest of development associated with similar mental defects, that were it not for the cleanly, well-fed, and in most cases happy appearance of the children one would be strongly reminded by them of Dickens' description of the inmates of Dotheboys Hall. Many no doubt are comely and well proportioned though wanting the bright expression of healthy childhood, but many more are deformed bodily as well as mentally—some with heads far too large for their bodies (macrocephalic and hydro-

cephalic), others with heads hardly larger than those of infants (microcephalic); others again disfigured by the Cretin's coarse skin and fat expressionless face, while many more are the subjects of some paralytic trouble leading to deformity or wasting of the limbs.

Then, again, many have the generally unhealthy appearance so commonly associated with scrofula and consumption; and indeed the relation between scrofula and idiocy is a very close one, and this group furnishes a considerable proportion of the children admitted to the Institution.

Injury to the brain at the very commencement of life is the cause of idiocy in another class of cases, and is associated with a rigidity of the muscles and contraction of the limbs which render those so affected as helpless as paralytics.

These groups include the bulk of the patients, and, though many more might be mentioned, their enumeration will serve to show how many and various are the causes which lead to the wrecking of the mind, and often of the body, too, in the earliest years of life.

To most persons an idiot is simply an idiot—a being deprived by a special act of the Divine will of his full share of intellect—and to very few probably, outside the medical profession, has it occurred to enquire whether the causes of idiocy are not fairly well-known and defined, and in some cases at least preventable.

The amount of intelligence possessed by the children on their admission to the asylum, of course, varies immensely; some children being scarcely more than dull and very backward, while others are apparently mindless, unable even to feed themselves, apathetic and totally regardless of anything that goes on around them.

The methods of education are necessarily, therefore, equally various both in kind and in degree.

For the more intelligent the ordinary means employed in schools are sufficient, the only difference being that such things as are easily learnt by young healthy children, are only mastered here by children much older slowly and with difficulty. It is only a question of degree. But even at this stage, unfortunately, the

weak-minded child is at a disadvantage, for both parents and teachers in ordinary schools, finding how dull and unteachable the child is, too often relinquish all attempts to mend matters, so that instead of the child having devoted to him an increased amount of care and attention corresponding to his needs, he has less even than would have been his share had he been possessed of his full intellectual powers. Even in the education of these, the most intelligent of the patients, the gentleness and patience demanded of their trained teachers is very great, but it is in the eliciting of the first signs of intelligence from the apparently mindless creatures that these qualities of patience and gentleness appear so admirable and, to the stranger, so wonderful.

Some of the children are on admission so helpless, so apathetic, so totally devoid of everything that we associate with the term 'mind,' that it would seem impossible for any ray of light to penetrate their mental darkness, or for any spark of intelligence ever to be obtained from them.

To them no ordinary method of education is applicable, they understand neither speech nor signs; possess no imitative faculties, and cannot therefore be taught by example; are too apathetic even to observe what goes on near them.

To those untrained to the work such cases do indeed appear hopeless. There really seems to be nothing to work upon—nothing to show where or by what means a beginning ought to be made. Yet even such cases as these do improve, some of them very greatly, though their progress is painfully slow. To attract and arrest the attention of such a child, and to make him begin to observe, is the first necessity, and every imaginable device is tried. Some can be attracted by bright colours, and made to observe them and look for them; others can be first influenced by loud sounds, some by gentler sounds and music. With others, again, the following plan is tried: A teacher collects round her a class of pupils, including some possessed of at least some imitative faculty, and throws a soft ball at each of them in turn. The worst cases take absolutely no notice of this, even though the ball be thrown right in their faces. This

exercise is continued patiently day by day, until at last the child begins to notice when the ball is thrown at him; next he moves his head to avoid being hit, and this is a great triumph for the teacher, for it shows a distinct exercise of the will with a definite object in view. Still further improvement is shown by his raising his arm to ward off the ball as it comes, and finally he is led to show the first sign of imitative faculty by picking up the ball and throwing it back. This marks a great advance and opens up a new field of education. The example of his teacher and his fellow pupils can now influence him, and such an exercise as this tried: A class of pupils is arranged in a row and marched round the room to the sound of music. The beginner at first stands stock still, and has to be led by the teacher. After a time he walks with the others so long as they walk in a straight line, but so soon as they turn a corner he falls out of line and comes to a standstill, and has to be replaced in line by his teacher. These are of course merely examples of the kind of means employed, but they serve to show how the first evidences of intelligence are called forth. When such a point as this has been reached, progress more or less rapid is assured, then methods of higher education are adopted, the use of bricks of various shapes, boards with holes in them and marbles to fit the holes; then similar boards, but with the holes and marbles of various sizes, so that selection of the marbles becomes necessary, and innumerable similar devices for exercising both hand and mind.

And so little by little the intellect is developed and the hands and senses taught to obey the will, until at last it is possible to begin to teach them such things as shall in themselves be useful to them and even such things as shall enable them to earn their own living. In some of the class rooms a cabinet is fitted up as a shop, and here the children are taught to keep shop and make purchases under the supervision of their teacher.

In this way not only are they taught to go to the places directed, but to go to the right shop, to ask for the right thing, and then to pay the right money and demand correct change, and it is

interesting and almost amusing to see their indignation and anger on being purposely given incorrect change or the wrong article.

Childish as all this may appear to my readers to be, it does not seem so to those who have the care of these children after they leave the asylum, for when once a child has learnt to run errands and to do such like simple things, it ceases to be a burden pure and simple to those who look after it, and may even become very useful indeed, particularly as such children are patient and content to go on doing the same thing for hours together. This is turned to good account in the work of the asylum, where big boys are told off to roll the grass, dig the garden, chop sticks, &c., and seem to enjoy the occupation long after ordinary children would have become thoroughly tired of it. As their intelligence is developed so their occupation is varied and advanced, until they are capable of being taught some useful trade.

Under the guidance and supervision of an instructor in each workshop the inmates make all the boots, cloth clothes, mattrasses, and many other things used in the establishment, besides baking the bread, and doing most of the carpentry.

Even those who never do more than the roughest and simplest work, benefit by the physical exercise, and it has been found that some patients, suffering from rigidity and contraction of limbs, arising from injury to the brain at birth, have to a great extent recovered the use and the control over the affected muscles by constant progressive exercise of them, and this even in cases which seemed to be beyond the hope of recovery or even improvement.

The farm and garden give opportunities for profitable and healthy employment of quite another kind, and to this kind of occupation such persons take very kindly, and not a few of them are now earning an honest livelihood as agricultural labourers.

It has been impossible to detail all the means employed in this institution for cultivating and strengthening the faculties of its inmates, but enough has been said to give a general idea of the methods and their results.

It would, however, be taking too narrow a view of the matter,

were the work accomplished by the Royal Albert Asylum to be measured simply by the gain in intelligence accruing to those who have been educated here, great though this certainly is.

In the first place, it must be remembered that each idiot is not only a person incapable of earning his own living, but one requiring the care and attention of others, and that by collecting such persons together in a large institution hundreds of hard-working parents are set free to devote themselves to their proper occupations unhampered by the care of these helpless ones. The gain thus effected is a very great offset to put against the vast cost of the establishment.

And this is done without producing upon the minds of those who are thus benefited the pauperising effect of so-called charity; for to the parents there is a great and real difference between obtaining admission for a child to such an institution and having it provided for by local charity and help.

Again the training afforded to the teachers and the lessons learnt therefrom and applicable to other teaching institutions is a real and solid gain. Nor is medical science unaffected. Here many great problems are being worked out as they could be under no other conditions—the question of inheritance of disease, the influence of alcohol and of consanguineous marriages in producing idiocy, the relation of idiocy to phthisis and other well-defined diseases, the association of idiocy and deaf-mutism in families, and many other questions of scarcely less importance.

So that from whatever standpoint it is viewed all will, I think, agree that the work done by the Royal Albert Asylum is a real good work and charity in the highest and best sense of the word.

I have to express my thanks to Dr. Shuttleworth, the medical superintendent of the Asylum, and to Mr. Diggens, the secretary, for their kindness in supplying me with information; and to the teaching staff, for their courtesy in enabling me to see for myself how the teaching is carried on.

[NOTE.—While the foregoing paper was going through the press the sentence on page 242, which spoke of the new recreation hall as nearing its completion, was modified to its present form. The hall was opened on Monday, September 17th, by Lord Herschell, as president at the Quinquennial Festival. Its title, "The Winmarleigh Recreation Hall," is commemorative of the invaluable services rendered to the institution by the noble chairman of the Central Committee. The occasion was further signalised by (1st) the presentation on the part of the Central Committee of an excellent portrait of Mr. Diggens, the first secretary of the Asylum, to whose indefatigable zeal and administrative ability from the time of his appointment in 1865, the financial prosperity of the institution is mainly owing; (2nd) by the unveiling of statues of the Queen and the late Prince Consort, presented by Mr. James Harrison, of Dornden, Tunbridge Wells; and (3rd) by the opening of an organ, the gift of Mrs. F. E. Rawson, of Thorpe, Halifax.

In the infancy of the Asylum Dr. de Vitre was thought by some to be a dreaming enthusiast when he said in one of his speeches that he did not despair of £100,000 being raised for so excellent an object. Mr. Diggens, in acknowledging the presentation of his portrait by Lord Winmarleigh, stated that the gross total of contributions received was upwards of £298,664. It will interest many of our readers to know that the first contributions to this large sum actually received were £10 from the Misses Yates, and £5 from Mrs. John Robberds, sent to me by the Rev. J. Robberds, then of Liverpool, in response to a letter in the *Inquirer*. The appointment of Mr. Diggens was followed by that of Dr. Shuttleworth as medical superintendent. That office he has held from the first, and to his high professional qualifications and judicious management the successful internal administration and the development of educational plans are mainly due. The harmonious co-operation of the two principal office-bearers has thus happily imparted something of their own spirit to the whole staff and made the Royal Albert Asylum so beneficent an institution and so justly the pride of the seven northern counties.—D.D.

THE LAKES.

By VALENTINE D. DAVIS, B.A.

I.

No need to explain to a Lancaster boy *what* Lakes are meant. The mere words bring back a crowd of delightful recollections, of eager pleasure and excitement,

> "sensations sweet,
> Felt in the blood, and felt along the heart."

In the old days it was in May, since terms were adopted it had to be after Whitsuntide; but always the three days at the Lakes, the great annual excursion, stood out as the chief delight of all the school year.

Even when it chanced to rain most of the time the spirits of small boys could not be damped, and the big rooms and passages of the hotel where we were quartered, almost empty but for our own party, would be alive with merriment. But, of course, we wanted it to be fine. And one of the recollections most vivid in my mind from long ago is of a very small boy anxiously watching signs of the weather the day or two before, and of a kind of rapture in going out into the play-ground the evening before we were to start, a clear, fresh evening in May, when the Great Beech was putting out its leaves and the air was full of gnats, which were taken as a promise of fine weather in store. And then in the house, the excitement of feeling that the knapsacks were being packed and the monkey-jackets got ready, and the delicious sense that to-morrow there would be no lessons, and we really were going to the Lakes!

Until a certain decadence of primitive habit somewhat altered the order of the day, there was an early train to Windermere by

which we generally went; and my impression is that on that morning breakfast was more a meal of excitement than of careful solid eating. But then there were biscuits and meat-pies to be pocketed (there is a legend of a boy who was once found to have eaten *his* before he got to the station!) and no one can say that full justice was not done to the glorious meat-tea which was a regular institution, on the first two days at the hotel where we were staying, whether it was Grasmere, Coniston, Ullswater or Borrowdale, and on the third day generally at Rigg's Hotel, Windermere, on the way home.

Let not the philosopher too curiously inquire how much of the sublimity of Nature in those early excursions impressed itself on boyish minds and hearts. They were perhaps days of unconscious preparation, full of pleasure and excitement over trivial things, and eagerness for the achievement of mountaineering exploits, but they made us familiar with the great mountains and that lovely country, which afterwards might touch us with a deeper meaning. And for my part, I am thankful for all those early memories, even the most trivial. The very dust on the five miles of road between Windermere and Ambleside, longest on a homeward tramp, is pleasant to me, and the bits of grass on the roadside, where tired boys might rest. Even blisters and stiff limbs are not without their charm when they belong to the achievements of those days. And in a strange medley appear the faces and manners of sundry waiters at the hotels and drivers of waggonettes, most striking of all perhaps "*the giraffe*," surely once my lord's own serving man, and others not to be forgotten. The pleasure of lawn-tennis belongs to latter day habits, and I think also the supreme engrossing interest of fishing for minnows and even larger fry. But in every generation big mountain walks, for those who were strong enough, have held their place. Over Kirkstone Pass in drenching rain, down Honister in a storm of hail, on the steep sides of Helvelyn thirsty in the scorching sun, plodding resolutely over miles that seemed to have no end, down Langstrathdale and Borrowdale to the Lodore Hotel, these belong to the *Strapazen*, which an old boy likes to

remember. And let me here record the virtues of a dear old stick I had, and his luckless ending. Years ago it was, after more than one season of strengthening attachment, and it must have been on a single day excursion in autumn, we were walking home along the Windermere road when in a rash moment, eager for spoils, I threw up my trusty friend into the richly laden branches of a horse-chestnut tree. But nothing fell, for the chestnuts kept my stick, and to this day I think with affectionate regret of his sturdy strength and smooth sides and a quaint twist in his neck, and the resolute friendliness with which he helped me from Patterdale over the rugged sides of High Street down to Haweswater and back again.

One year we went by train round Morecambe Bay and right along the Cumberland coast almost to St. Bees, and then drove across by the foot of Ennerdale round to the Borrowdale Hotel. It was a drive the length of which had hardly been realised beforehand, and as one of the breaks came to grief on the way the more vigorous of the party had to walk over the hills into Borrowdale. The return journey was made entirely by rail, along the shore of Bassenthwaite, placid and beautiful, by Whitehaven and Furness home. It was a wonderful journey by the sea in the evening light. One little fool wrote some verses in the train which he is not sorry to forget; but he will not soon forget the beauty of the sunset as we coasted round the bay, and felt the salt spray of the incoming tide as we crossed the channel between Grange and Arnside. It was a day on which to realise the glory of our English mountains, as

"Round our sea-girt shore they rise in crowds:"

and perhaps the noblest of them all, the northern sentinel in solitary grandeur, Mount Skiddaw, who

"shrouds
His double front among Atlantic clouds."

A first ascent of Scawfell Pike is also not to be forgotten: the lovely views in Borrowdale, the sense of going up into the wilder solitude of the mountains beyond Seathwaite, then the exulting cry: "*Thalatta! Thalatta!*" from boys who had been reading Xenophon's

Anabasis, when from the Sty Head Pass in the far distance beyond Wastwater we had a first glimpse of the blue sea. On Esk Hawse the clouds came down upon us, and there was anxious questioning whether a party of boys might venture further. At this point comes in a memory curiously vivid, but only of gastronomic interest. For then, while we were resting and waiting, I found that I could eat a huge piece of cheese almost without bread, which, as a rule, I heartily disliked. But the mist cleared, and we were happily allowed to go on. Very delicious and refreshing was the last water before the final ascent, and there followed the excitement of a patch of snow found in a crevice of the rocks, found with delight and used for refreshment, but also for military purposes. The last ascent is wild and rugged, but easier than it looks, at least for the unencumbered, who can enjoy stepping freely and occasionally jumping from one rock to another. As we made our way up we noted with wonder the Langdale Pikes far below us, usually standing so nobly out among the hills as we see them from Lancaster or the Ambleside Road, but now appearing quite diminutive from the greater fells on to which we had climbed. And at last the summit, not without pride in boyish hearts that they actually stood on the highest point in England. No one will grudge them the cheer with which they celebrated that achievement nor the satisfaction with which they rested after the long walk home.

Every boy has his own recollections of the walks he most enjoyed, and the pleasure of boating on the lakes. Mine perhaps may serve to quicken pleasant memories. On Ullswater I learnt to know the treachery of those beautiful deep waters and the sudden squalls that may sweep down from the mountain gorges and take you unawares; and there also befell a comic incident, when we had started with a heavy load innocently in a very leaky boat, and before long had to make for the shore and put out an unwilling company, and then my father and I rowed home the boat as best we could with our feet upon the seats, and before we reached the landing-place the footboards floating quietly about underneath.

And more than once we were taught the folly of letting ourselves go too eagerly and too far with the wind, in the hard struggle to get home again in the face of wind and waves. Coniston and Crummock are both remembered for such teaching, and also for enchanted hours spent on them towards sunset in a perfect loveliness of calm, delicious coolness in the air, and a gentleness of light upon the hills which made one feel,

> "It is a beauteous evening, calm and free,
> The holy time is quiet as a Nun
> Breathless with adoration; the broad sun
> Is sinking down in its tranquility."

The glory of sun-set we also saw not infrequently as a parting vision of splendour from Orrest Head, before train-time at Windermere Station; and many a time the journey home has been one long dreaming of delight in the thought of all that has been enjoyed.

The road by Windermere Ferry and Esthwaite we did not often take. But once, making for Coniston, I like to remember our first glimpse of Hawkshead, when we

> "Saw the snow-white church upon her hill
> Sit like a thronèd Lady,"

and one who loved Wordsworth repeated to us those lines, and afterwards as we walked through the quaint old place, told us how the poet was there as a boy at school.

But there must be an end of such reminiscence. I must not dwell upon the ascents of Coniston Old Man, the beautiful crystals of the mines, the sure-footed ponies mistrusted by anxious ladies, the wonderful view from the top on a clear day, not only lakes and mountains, but splendid reaches of the sea, and Lancaster itself made out in the far distance. Pleasant as it is to ramble on I must not speak further of Langdale and Dungeon Gill, of Colwith and Skelwyth Bridge, of Loughrigg, Fairfield, and Nab Scar, of lovely Easedale and the solitary tarn, nor of that mad-cap escapade, when, at the mere daring of his friend, a boy who could not swim jumped as he was into the tarn, where the bank was steep and the waters deep, and when luckily he had been fished out again, though in sad disgrace, became something of a hero. Nor must I linger by the

Bowder Stone, on Grange Bridge, or by the tumbling waters of Lodore. The smooth green slopes of Cat Bells must be passed by, splendid for impromptu toboganing, but destructive to boys' tailoring. Even the pencil-works at Keswick must be for once unvisited.

But there they are, lakes and mountains, good familiar roads and rugged paths among the hills, lovely valleys and wild rocky solitudes, waterfalls hidden away but fascinating to explore, mountain streams which you learn to love as cheery comrades while you track them down into the plain below. Far or near it is a country to be loved,—England's jewel girt about by silver seas, touching with its charm every boy who has been at Lancaster and has learnt the good lessons of holiday as well as school.

II.

In the memory of those early excursions, as in the deepening convictions of later years, Grasmere stands out not perhaps as the most beautiful or the grandest of the lakes, but as the dearest. With its sister Rydal, and the wild mountain child, Easdale Tarn, hidden up among the hills, it lies there always touched with a tenderer light than any of the others, and a sure promise of delight which greater splendour could not give. Partly perhaps it is because Grasmere is most familiar and the goal of many other single day excursions, partly from the charm of all the Wordsworth associations, but most because of the sweet influence of its own quiet beauty, a certain friendliness and restfulness in the outline of its encircling hills, its green meadows and woods, the old church tower, and the lake itself with its one island, not too great for the tired spirit to find rest and gladness there, and the sorrowful an unspeakable peace.

It may be largely from the subtle working of much personal experience of joy and sorrow there, but there is no scene in the whole country that so touches me as that unfolding of Grasmere

vale as one comes out of the woods on the coach-road from Rydal and sees at once the placid lake, and the white tower of the church almost reflected in the waters, and Helm Crag beyond.

There most fitly, and in the church-yard by the poet's grave one may recall Matthew Arnold's beautiful lines of elegy on Wordsworth:

"He laid us as we lay at birth
On the cool flowery lap of earth,
Smiles broke from us, and we had ease;
The hills were round us, and the breeze
Went o'er the sun-lit fields again;
* * * * * * * *
Keep fresh the grass upon his grave,
O Rotha, with thy living wave!
Sing him thy best! for few or none
Hears thy voice right, now he is gone."

And there are other verses of grateful commemoration, which one does not tire of repeating, verses which mean all the more because they come to us from a distant land, from one nurtured in very different surroundings, though of kindred race. They are by Whittier, the Quaker poet of America.

"How welcome to our ears, long pained
By strife of sect and party noise,
The brook-like murmur of his song
Of nature's simple joys!

The violet by its mossy stone,
The primrose by the river's brim,
The chance-sown daffodil, have found
Immortal life through him.

The sunrise on his breezy lake,
The rosy tints his sun-set brought,
World-seen are gladdening all the vales
And mountain-peaks of thought."

In our modern life, in which it is often so difficult to keep true to the simplicity of Nature and a noble manhood, to be saved from false sentiment and passion, to have quietness of heart and genuine

gladness in life, it is a great treasure which comes with the understanding of Wordsworth's secret, greatest perhaps to those who have been led by him through the country that he loved so well, and so learn with him to enter into that blessed mood,

> "In which the burden of the mystery,
> In which the heavy and the weary weight
> Of all this unintelligible world,
> Is lightened:—that serene and blessed mood,
> In which the affections gently lead us on,—
> * * * * * * * *
> While with an eye made quiet by the power
> Of harmony, and the deep power of joy,
> We see into the life of things."

I count it a great happiness to have been taught to honour Wordsworth from the time when "The Daffodils" (like Bryant's "Waterfall") used sometimes to be said among the hymns on Sunday afternoon. The reverence for the name of a great poet or prophet often comes to children through their elders, before any real understanding of the substance of the teaching. But so they are made attentive, and guided in the right direction, where afterwards they may learn to find what will be to them the bread of life.

For a quarter of a century I have been to the Lakes almost every year, for the three days or for longer or shorter time. I cannot point to any day or any year and say: "*There* was the end of careless boyhood, and the deeper life began, and Nature also began to have a deeper meaning." It came in slow, unconscious growth, and with it came the growing sense of the power and helpfulness of Wordsworth. Deepening affections and stronger will thrown into the stress of life learnt also to find more in that encompassing presence of the earth and heavens, more for refreshment and delight, and more for the strengthening of faith and faithful purpose. Duty was not revealed in Nature, but as in the inward life it was more clearly understood it brought new light also into the world.

"Stern Law-giver! yet thou dost wear
The Godhead's most benignant grace;
Nor know we anything so fair
As is the smile upon thy face:
Flowers laugh before thee on their beds
And fragrance in thy footing treads;
Thou dost preserve the stars from wrong;
And the most ancient heavens, through Thee, are fresh and strong."

As the need increased so there came the greater help; and the poet who at first had only led me into "jocund company," and given the pleasure that "dances with the daffodils," brought a calmer spirit and a quickening of faith into troubled and restless hours.

"For I have learned
To look on nature, not as in the hour
Of thoughtless youth; but hearing oftentimes
The still, sad music of humanity,
Nor harsh nor grating, though of ample power
To chasten and subdue. And I have felt
A presence that disturbs me with the joy
Of elevated thoughts; a sense sublime
Of something far more deeply interfused,
Whose dwelling is the light of setting suns,
And the blue sky, and in the mind of man:
A motion and a spirit, that impels
All thinking things, all objects of all thought,
And rolls through all things."

There comes into our life a deeper joy when with Wordsworth, following him in plain living and high thinking, we let Nature "inform the mind that is within us," and "impress with quietness and beauty." Then in the humblest place we are free men and have the freedom of the universe. Then also we may learn his lesson of the Daisy, commonest of way-side flowers, which yet can teach so much through its "concord with humanity:"

"Is it that Man is soon deprest?
A thoughtless thing? who, once unblest,
Does little on his memory rest,
Or on his reason,

And Thou would'st teach him how to find
A shelter under every wind,
A hope for times that are unkind
And every season?

Thou wander'st the wide world about,
Unchecked by pride or scrupulous doubt,
With friends to greet thee, or without,
Yet pleased and willing;
Meek, yielding to th' occasion's call,
And all things suffering from all,
Thy function apostolical
In peace fulfilling."

We may rest with thankfulness amid all change, with passing years learning ever to feel more deeply that there is a "central place, subsisting at the heart of endless agitation," not heedless of sacred memories, nor without hope that looks into the future. "That inward eye, which is the bliss of solitude," can look back at the days long ago, and we shall be again amid old scenes and hear familar voices. And from other homes, with other friends, if we pass again through the well-known country of the Lakes, or linger in one chosen place, it will be the more beautiful to us for what once it was to eager boyish hearts. However coming years may deal with us, into whatever distant lands they may lead us, they cannot destroy the power of affection or the bright pictures of a grateful memory. Even when the time comes that the old house is no longer there, and the Great Beech, guardian of many generations of boys' lives, no longer hears the tread of eager feet running by, and merry voices in the play-ground, Lancaster will yet not be forgotten, nor the Lakes, and in lives that have grown up stronger and better for the old School there will remain affectionate thought of past years, to "breathe perpetual benediction."

SUBSCRIPTION LIST.

Subscribers.	Copies.	Additional. £ s. d.	Total. £ s. d.
V. D. Davis	2 ...	1 0 0 ...	2 0 0
H. Woolley	1 ...	...	0 10 0
A. F. Herford	1 ...	0 10 0 ...	1 0 0
H. Ewart	1 ...	...	0 10 0
Walter Greg...	1 ...	...	0 10 0
T. L. Worthington	1 ...	...	0 10 0
M. H. Simpson	1 ...	...	0 10 0
J. Priestley Smith	1 ...	...	0 10 0
W. Wharton Ogden	1 ...	0 5 0 ...	0 15 0
A. E. Gladstone	1 ...	0 11 0 ...	1 1 0
J. C. Haslam	1 ...	0 10 0 ...	1 0 0
J. W. Wearing	1 ...	0 0 6 ...	0 10 6
R. W. Wearing	1 ...	0 0 6 ...	0 10 6
George Dalby	1 ...	...	0 10 0
Charles Wicksteed	1 ...	...	0 10 0
Ernest E. Briggs	2 ...	...	1 0 0
Thos. Thornely	1 ...	...	0 10 0
Lewis Haslam	1 ...	0 10 0 ...	1 0 0
J. E. Darbishire	1 ...	0 10 0 ...	1 0 0
Norman Moore	3 ...	0 11 0 ...	2 1 0
W. Llewelyn Herford	1 ...	...	0 10 0
H. C. Bolingbroke...	1 ...	...	0 10 0
Roland New	1 ...	...	0 10 0
Arthur New	2 ...	...	1 0 0
C. Harold Herford	2 ...	...	1 0 0
Lucas Thomasson	1 ...	0 14 0 ...	1 4 0
F. W. Osler	1 ...	...	0 10 0
J. H. & G. P. Raundrup	1 ...	...	0 10 0
John Gladstone	1 ...	0 10 0 ...	1 0 0
F. H. Warden	1 ...	...	0 10 0
Charles W. Satterthwaite	1 ...	...	0 10 0
Walter B. Dendy	1 ...	...	0 10 0
J. Lawson Whalley...	1 ...	...	0 10 0
H. G. Nordaby	1 ...	...	0 10 0

Subscribers.	Copies.	Additional. £ s. d.	Total. £ s. d.
Alfred C. Osler	1 ...	...	0 10 0
W. R. Wills...	1 ...	...	0 10 0
Frank Cartwright	1 ...	...	0 10 0
Grosvenor Hollins	½ ...	...	0 5 0
William Robson	2 ...	...	1 0 0
Percy Scott Worthington	1 ...	0 0 6 ...	0 10 6
C. W. S. Worthington	1 ...	0 0 6 ...	0 10 6
Walter C. Shepherd	½ ...	...	0 5 0
Percy Lawford	1 ...	0 10 0 ...	1 0 0
W. Haslam	1 ...	0 10 0 ...	1 0 0
A. Currer Briggs	1 ...	...	0 10 0
„	½ ...	...	0 5 0
Herbert W. Wills	1 ...	...	0 10 0
G. Herbert Reid	1 ...	...	0 10 0
W. H. Curtis	1 ...	...	0 10 0
H. S. Greg	1 ...	...	0 10 0
Walter Heald	1 ...	...	0 10 0
Ernest Heald...	1 ...	...	0 10 0
A. H. Paterson	1 ...	0 0 6 ...	0 10 6
W. Field	1 ...	...	0 10 0
A. Cliff	1 ...	0 4 0 ...	0 14 0
W. B. Marshall	2 ...	...	1 0 0
Howard S. Smith	2 ...	1 2 0 ...	2 2 0
W. B. Worthington	2 ...	0 10 0 ...	1 10 0
H. Brassey	2 ...	...	1 0 0
R. Roscoe	1 ...	...	0 10 0
Edgar Taylor	1 ...	0 5 0 ...	0 15 0
Arthur Allen...	1 ...	...	0 10 0
Harold Allen	1 ...	...	0 10 0
Walter I. Allen	1 ...	...	0 10 0
Philip H. Holland	1 ...	0 5 0 ...	0 15 0
O. H. & A. G. New (T.H.G.) ...	1 ...	...	0 10 0
T. Hardie	1 ...	...	0 10 0
A. C. Kent	1 ...	...	0 10 0
Geo. Patrickson	2 ...	...	1 0 0
Henry R. Hutton	2 ...	...	1 0 0
Richard H. Hutton...	2 ...	...	1 0 0
C. M. Wellbye	1 ...	...	0 10 0
W. Hancock...	2 ...	...	1 0 0
Edgar Worthington...	2 ...	0 15 6 ...	1 15 6
Walter S. Thomson	¾ ...	...	0 7 6

Subscribers.	Copies.	Additional. £ s. d.	Total. £ s. d.
Harold S. Ellis	1 ...	...	0 10 0
M. Locke Blake	1 ...	...	0 10 0
E. H. Berry	1 ...	0 4 0 ...	0 14 0
Geoffrey New	1 ...	...	0 10 0
Archibald Nettlefold	2 ...	...	1 0 0
Herbert New, Junr.	1 ...	...	0 10 0
George H. Cox	1 ...	0 10 0 ...	1 0 0
U. V. Herford	2 ...	...	1 0 0
R. E. Haslam	1 ...	0 6 0 ...	0 16 0
H. Russell Worthington	1 ...	...	0 10 0
Walther Weyermann	1 ...	2 0 0 ...	2 10 0
Theodore Martin	1 ...	...	0 10 0
Vivian W. Hardie	1 ...	...	0 10 0
A. Milnes Marshall	2 ...	0 1 0 ...	1 1 0
Henry C. Lamport	1 ...	...	0 10 0
Edward Gaskell Lamport (F.N.L)	2 ...	...	1 0 0
Robert Dempster	1 ...	0 11 0 ...	1 1 0
Henry Whitman	1 ...	...	0 10 0
W. Eller	1 ...	0 5 0 ...	0 15 0
H. S. Solly	1 ...	...	0 10 0
R. R. P. Wearing	1 ..	0 0 6 ...	0 10 6
A. H. Worthington	1 ...	0 0 6 ...	0 10 6
William Field	1 ...	...	0 10 0
C. W. & R. H. Armstrong ...	1 ...	...	0 10 0
H. A. Paley	1 ...	...	0 10 0
118½ Copies at 10/-	59 2 6	£13 13 0	£72 15 6

R. & G. Brash, Printers, Lancaster.

3 2044 029 058 484

DATE DUE

GAYLORD

PRINTED IN U.S.A.